DEVIDO ÀS MUDANÇAS DE VERSÕES DO PROCESSADOR WORD, COMO TAMBÉM À CONVERSÃO DE *DOC* EM *RTF* E DE *RTF* EM *DOC* SUGERIDAS À ÉPOCA, ESTA VERSÃO PERDEU UM POUCO DE SUA FORMATAÇÃO ORIGINAL E, PORTANTO, TEM FORMATAÇÃO UM POUCO DIFERENTE DA VERSÃO DEFENDIDA, EM PARTICULAR EM RELAÇÃO À PAGINAÇÃO. DESTA FORMA, PEÇO QUE NÃO SE FAÇA CITAÇÃO DIRETA BASEADA NESTA VERSÃO.

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PÓS-GRADUAÇÃO EM LETRAS/INGLÊS E LITERATURA CORRESPONDENTE

VOCABULARY INSTRUCTION: THE TEXT AS A SOURCE

IN THE CLASSROOM

por

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ABSTRACT

VOCABULARY INSTRUCTION: THE TEXT AS A

SOURCE IN THE CLASSROOM

CELSO HENRIQUE SOUFEN TUMOLO

UNIVERSIDADE FEDERAL DE SANTA CATARINA

1999

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The objective of this study is to contribute to the discussion on vocabulary instruction, and investigate, systematize and discuss procedures ESP teachers have used to teach vocabulary, both planned and unplanned, in the EFL reading classroom, in terms of criteria for text selection, procedures for vocabulary presentation and memorization of unknown words. The study is based on two premises: first, that reading comprehension is dependent on prior vocabulary knowledge, but also that reading is a major source of new vocabulary learning, that is, a relationship of "reciprocal causation" (Stanovich, 1986, cited in Harley, 1995); and second, that vocabulary learning profits from extensive exposition to the language (Krashen, 1989), but also from systematization as research on memorization has shown (Craik and Lockhart, 1972, Stevick, 1976, 1982; Baddeley, 1990). The research was carried out with three ESP reading course teachers from *Centro de Comunicação e Expressão – UFSC*. The results showed that, as for the criteria for text selection, the teachers mentioned topic familiarity and authenticity of the text, having similar views as to topic familiarity, but different views as to authenticity. In terms of the procedures for vocabulary presentation, a wide range of activities was used, mostly following the top-down approach to reading. As to the procedures for memorization, teachers capitalized very little on the possibilities presented in the specialized literature. Ultimately, the results

suggest the need for workshops involving ESP as well as EFL teachers, aiming at studying and discussing the procedures involved in vocabulary instructions.

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RESUMO

VOCABULARY INSTRUCTION: THE TEXT AS A SOURCE

IN THE CLASSROOM

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O objetivo deste estudo é contribuir para a discussão sobre ensino de vocabulário, e investigar, sistematizar e discutir procedimentos que professores de cursos de Inglês instrumental tem usado para ensinar vocabulário, tanto aquele não-planejado quanto o planejado em termos de critérios para seleção de textos, procedimentos para apresentação de significado e memorização de palavras novas. O estudo é baseado em duas premissas: a primeira é que a compreensão em leitura é dependente do conhecimento de vocabulário, e que a leitura é uma importante fonte de aprendizagem de palavras, assumindo, assim, a relação de "reciprocal causation" mencionada por Stanovich (1986, citado em Harley, 1995); e a segunda é que vocabulário se desenvolve a partir da exposição freqüente à língua (Krashen, 1989) possível através de leitura extensiva, mas também a partir de sistematização como pesquisa em memorização tem mostrado (Craik e Lockhart, 1972, Stevick, 1976, 1982; Baddeley, 1990). A pesquisa foi feita com três professores de Inglês Instrumental, do *Centro de Comunicação e Expressão – UFSC*. Os resultados mostraram que, quanto aos critérios de seleção de textos, os professores mencionaram familiaridade com o tópico do texto, e autenticidade, coincidindo quanto ao primeiro, e apresentando diferenças quanto à autenticidade. Em termos dos procedimentos para a apresentação de

significado das palavras, vários tipos de atividades foram usadas, em sua maioria seguindo a abordagem descendente de leitura. No que concerne aos procedimentos para memorização, poucas atividades foram usadas em relação as sugeridas na literatura especializada. Os resultados sugerem a necessidade de os professores, tanto de leitura quanto de inglês como língua estrangeira, se engajarem em uma perspectiva de ensino reflexivo com o objetivo de estudar e discutir procedimentos envolvidos no ensino de vocabulário.

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# CHAPTER I

## INTRODUCTION

Different perspectives to vocabulary instruction have been adopted by teachers of English. Different degrees of importance have been attributed, over the years, to vocabulary knowledge for reading comprehension. It was considered essential in Gough's (1972) bottom-up model since it implied a word by word decoding, but the model fell into discredit since it did not take into account the reader's background knowledge in the process of comprehension.

Vocabulary Knowledge was considered less important in Goodman's (1976) top-down model, since it placed more importance on the reader's background knowledge to the comprehension of the text. Vocabulary was assumed to be understood and learned by the process of guessing its meaning in context based on contextual clues, cognate words, suffixes and prefixes, and other strategies.

The top-down model of reading was consistent with naturalistic and also the communicative approaches in which the perspective for language teaching and learning was rather implicit and incidental. It is acknowledged today that the natural approaches which advocate "the 'absorption' of grammar and vocabulary with **no** overt attention whatsoever to language forms went too far" (Brown 1994, p. 369). There are signs that the pendulum that swung from direct teaching to incidental is coming to the middle, that is, to a balance between implicit and explicit teaching procedures for second language learning.

Concerning vocabulary instruction, teachers' perspective was greatly influenced by the top-down, naturalistic, and communicative approaches, that is, on implicit,

incidental learning of vocabulary (Sökmen, 1997, p. 237) by exposing learners to the new words within their context. Research, however, suggests that context plays a relatively less important role, and explicit instruction a "relatively greater role in the vocabulary growth of second-language learners" (Nagy, 1997 p. 76), and that it is "worthwhile to add explicit vocabulary to the usual inferring activities in the second language classroom" (Sökmen, ibid., p. 239).

Understanding that reading depends on vocabulary knowledge and that it may be a source of vocabulary learning in a 'reciprocal causation' (Stanovich, 1986, cited in Harley, 1995, p. 14), and corroborating the view that foreign language reading programs need to concentrate on improving students' vocabulary (Alderson, 1984), the objective of this study is to contribute to the discussion on vocabulary instruction, and investigate, systematize and discuss procedures teachers have been using to teach vocabulary in the EFL reading classroom.

## 1.1 RESEARCH QUESTIONS

Based on the five essential steps for vocabulary learning suggested by Brown and Payne (1994 cited in Hatch and Brown, 1995), that is: 1) having sources for encountering the new words such as texts, labels, word lists and dictionaries; 2) getting the word form, i.e., a clear image for the form of the new words; 3) getting the word meaning, quite general for beginners, and redefined and more specific for advanced learners; 4) consolidating word form and meaning in memory, i.e., making a strong memory connection between the forms and meaning of the words; 5) using the words; I aim at investigating the following research questions:

1.      What criteria do teachers use to select the texts they use in the EFL reading classroom?

2.      What procedures do teachers use to present the meaning of the new words, both planned and unplanned [1] words?

3.      What procedures do teachers use to assist the retention of the newly taught words, both planned and unplanned words?


1.2   SIGNIFICANCE OF THE STUDY


Assuming that vocabulary knowledge is important for reading comprehension, this study has four main justifications: a) an academic one, once it will bring discussion on what the specialized literature has proposed as procedures for vocabulary teaching as well as how vocabulary has been taught in ESP reading courses; b) a pedagogical one, because it will allow EFL teachers to reflect upon their teaching procedures in a reflective teaching perspective; c) an educational one, since reading tends to be, among the four skills, the most focused on and the most recommended skill for schools, both state-run and private, in most educational proposals (municipal, state and national); and d) social, in that developed vocabulary will allow EFL learners to have access to an immense body of knowledge published in English in books and on the Internet.

Ultimately, since ESP Reading Courses in Brazil have been very important courses aimed at developing the reading skills of Brazilian students, especially university students, this study will allow ESP reading teachers to reflect upon their

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[1] Unplanned vocabulary is the one not present in the planning, and teachers will have to resort to the means at hand to get through to the student. Planned vocabulary, on the other hand, is the vocabulary selected, by some criteria, to be taught (Seal, 1991, cited in Brown and Hatch, 1995).

procedures for vocabulary instruction, thus engaging in a reflective teaching perspective.

1.3 ORGANIZATION OF THE THESIS

The thesis is organized in four chapters. Chapter I included an introduction to the problem investigated, the presentation of the research questions, the significance of the study, and the organization of the thesis. Chapter II brings a review of the literature related to a) the procedures the different language teaching methods used for vocabulary teaching; b) the aspects involved in word selection and learning; c) the relationship between vocabulary and reading; d) the contribution from research on language learning and memorization to vocabulary instruction; and e) the general procedures for vocabulary instruction. Chapter III presents the analysis and discussion of the data collected. And finally, chapter IV brings the main conclusions of the study, the limitations and suggestions for further research and the major pedagogical implications.

**CHAPTER II**


**REVIEW OF LITERATURE**


In this chapter, I aim to present and discuss the theoretical basis of this study. The first section presents the procedures the different language teaching methods have used for vocabulary teaching. The second section reviews what linguists consider guidelines for vocabulary selection, and aspects involved in knowing words, that is, what it means to know a word, and some aspects affecting word learnability. The third section brings the relationship between vocabulary and reading, discussing the role vocabulary plays in reading comprehension, looking into bottom-up, top-down and interactive reading models, as well as reading as a source for vocabulary learning. The fourth section discusses the theoretical contributions from research on language learning and memorization to vocabulary instruction. The fifth section examines the general procedures presented for vocabulary instruction.


2.1    VOCABULARY   INSTRUCTION   IN   THE   LANGUAGE   TEACHING METHODS


Although very little research was done in terms of vocabulary acquisition until the 1980s, vocabulary teaching has had its place and has reflected the basic tenets of all the methods of English teaching. In the grammar translation method, vocabulary was taught in lists of isolated words, presented out of context with their respective meanings in the mother tongue. Repetition drills were performed in order to enhance memorization. The focus of researchers was on the size of vocabulary. Various studies

were done concentrating on the counting and semantic frequency of the most used words, with the most prominent being *The General Service List* by Michael West, first published in 1936, and revised and reprinted in 1953.

In the early 1900s, the Direct Method was proposed by Charles Berlitz under the influence of the basic tenets of François Gouin's naturalistic approach to language learning: teach learners directly (without translation) and conceptually (without grammatical rules and explanations). The method emphasized plenty of oral interaction and spontaneous use of the target language. Everyday vocabulary was taught: concrete vocabulary through the demonstration of objects or photos whereas abstract vocabulary was taught through associations of ideas in the target language (Brown, 1994).

In the 1950s, in the Audiolingual Method, adapted from the American Army Method and influenced by some tenets of the Direct Method, by the linguists' descriptive analysis of language and behavioristic psychologists' conditioning and habit formation, vocabulary was introduced in dialogues with plenty of repetition and pronunciation drills. It was claimed that these drills would lead to habit formation, with perfect pronunciation.

The amount of vocabulary was kept to a minimum and was selected in terms of frequency and in an expanding scope for the learners: lessons began with vocabulary of the classroom, then school, home, community, and work and later including vocabulary about the state, the nation and communication around the world. Some vocabulary was selected to show contrasts between the target and the source language (Brown, 1994).

In the Counseling-Learning Method, Charles Curran (1972) claimed that learners could learn better if motivated by personal investment. In the situations presented, the needed word was provided by the teacher when students, producing their utterance and expressing their meanings, realized they lacked it. The teaching and

learning of the language takes place when students are treated as a group in need of certain therapy and counseling where teachers and students join together "to facilitate learning in a context of valuing and prizing each individual in the group" (Brown 1994, p. 59). It is a non-directive approach to teaching vocabulary.

In the case of Suggestopedia, Lozanov (1979) claimed that a great amount of vocabulary could be retained if learning capitalized on "relaxed states of mind for maximum retention of material" (Brown, 1994, p. 61), which could be achieved through baroque music due to an increase in the alpha brain waves and a decrease in the blood pressure it causes. All the atmosphere led them to become 'suggestible'. Vocabulary was presented along with typical classroom activities such as readings, dialogs, role-plays and drama. Translation to mother tongue was used.

In the Silent Way, proposed by Gattegno (1972), material such as sets of Cuisinere rods (small colored rods of different sizes) and a series of wall charts to introduce vocabulary were used. The teacher provided a single-word stimuli, or short phrases and sentences, and students refined their understanding among themselves with very little intervention or feedback from the teacher. Students were engaged in the discovery-learning procedure and had to do most of the work by themselves (Brown, 1994).

The method TPR (Total Physical Response), developed by Asher (1977), claimed an association between a command given orally and the corresponding physical activity would lead to a better retention of the information. Acting out according to the oral command was crucial to learning, including vocabulary that was very limited to real commands such as *close the door* or *open the book* as well as simulated actions such as *clean the sink* without being in the presence of a sink (Brown, 1994).

The Natural Approach, proposed by Krashen (1981, 1982), claimed that language was acquired naturally, just by exposing the learner to the language. The natural meaningful communication provided the comprehensible input, which triggered acquisition. Vocabulary was acquired naturally when the focus of the communication was on the message, not on the language. The teacher and the reading material were sources of the learner's input for language acquisition.

At the beginning of Communicative Language Teaching (CLT), the notional-functional syllabus was expected, in principle, to focus on the learner's predicted or verified needs to communicate, which implied an expected rich diversity of lexical content. However, since it was a very contradictory approach to language teaching, a "structural lamb served up as notional-functional mutton" (Campbell, 1978, cited in Brown, 1994, p. 68), language was presented as an inventory of functional units rather than grammatical units. Vocabulary was kept to a minimum, and new lexis was "still largely subordinate to structural and functional patterning in practice and production"(McCarthy, 1984, p. 12).

The English for Specific Purposes (ESP) approach to reading was developed in the late 1960s and early 1970s, and considered as part of the communicative approach to language teaching. Introduced in the Brazilian Federal Universities in the 1970s under the term *instrumental,* its early phase emphasized text decoding, and grammar and word meaning explanation was intense. Its following phase was characterized by an emphasis on the reading process and on activities to activate the reader's background knowledge, reflecting the top-down reading model (Scaramucci, 1995).

The emphasis on the linguistic component was constrained to the teaching of strategies for lexical inference through focusing on affixes, cognates, on textual organizing elements such as connectives and reference, aiming at compensating for the

poor linguistic knowledge of the reader, while more systematic teaching of grammar and vocabulary were considered conservative (Scaramucci, 1995).

The "cult for authenticity", that is, the need to use authentic materials - written by and for native speakers, especially texts, was originated in the CLT (Day & Bamford, 1998).

Today, there is a growing concern with vocabulary instruction among EFL teachers and material designers. Different activities incorporating recent findings of research on vocabulary have been introduced in EFL coursebooks, reflecting the recognition of the importance of vocabulary.

Hatch and Brown (1995) comment that lots of textbooks have been written with activities to help students learn the vocabulary, most of which use some kind of vocabulary adjustment: selection and control. Selecting would mean the use of short terms, common or familiar terms, same word for the same concept, precise terms, while controlling calls for a number of word repetitions and for contextual definitions of terms (p.409).

## 2.2    VOCABULARY SELECTION AND KNOWLEDGE: SOME ASPECTS

## 2.2.1 VOCABULARY SELECTION FOR TEACHING

Vocabulary should be chosen considering some criteria. Willian Collins and Sons (1979, in Hatch and Brown, 1995, p. 409) suggest eight guidelines for vocabulary selection: a) frequency; b) words with broader range (higher level concepts first, producing hierarchies such as food, meat, lamb, roasted lamb); c) communicative needs;

d) lexical sets including words that are commonly found together; e) known words, such as international words; f) new words; g) style, such as simple, concrete, expressive and pleasing words; h) idioms, because they cannot be deduced from their parts.

Gairns and Redman (1986) claim that the relative importance attached to the various criteria will depend on each teaching situation. The authors, however, suggest some criteria: a) frequency, since there is a significant correlation between frequency and usefulness; b) cultural factors, so that words relative to one's environment and sociocultural aspects are selected rather than words related to other cultures; c) need and level, where the supremacy of level over need is an error, since effective learning of everything is reduced if the student does not perceive the vocabulary input as useful; d) classroom vocabulary and language activity instructions, without which students will fail to follow the class.

In terms of criteria for vocabulary selection for reading courses, I believe that the most important criterion to be used for beginning students is frequency. Michael West's General Service List is the result of a carefully carried out research on the most frequent words used in English, which might be used as a resource book for teachers. Content words such as verbs, nouns and adjectives, as well as grammar words, such as prepositions and connectives may be selected provided they are frequent words. In case of more advanced students, field-specific words may be introduced, since they are important words for the students to be able to cope with texts in their areas. Also, broader range words and students' needs should play an important role in the selection of vocabulary to be taught.

2.2.2   WHAT DOES IT MEAN TO KNOW A WORD?

Teachers should know what can be expected from the students in terms of vocabulary knowledge and vocabulary learning in order to decide on their teaching procedures for vocabulary instruction. Thus, it is important to bring up the issue of what it means to know a word and some factors that may interfere in the process.

FL learners seem to follow a continuum from: a) never having seen the word; b) having seen the word, but unable to remember the meaning; c) recognizing the word related to some context; d) understanding the word in the context; to e) knowing many meanings according to various contexts.

Carter (1987) observes that knowing a word means knowing: a) how to use it productively; b) the likelihood of encountering it; c) the syntactic frame into which it can be slotted in and its derivations; d) its relations with other words both in the target language and in L1; e) its coreness, its pragmatic and discoursal functions and its style levels; f) its different meanings and the range of its collocational pattern; g) its fixed expressions memorized to repeat and adapt according to the situation.

Laufer (1997) points out that it is generally agreed that knowing a word means knowing: a) its form - spoken and written; b) its word structure - the basic free morpheme and its common derivations and its inflections; c) its syntactic pattern in a phrase and sentence; d) its meaning: referential, affective and pragmatic; e) its lexical relations with other words, such as synonymy, antonymy, hyponymy; and f) its common collocations[2].

2.2.3 SOME FACTORS AFFECTING WORD LEARNABILITY

Although teachers have an experienced ability to predict vocabulary difficulties (Brutten 1981, cited in Carter & McCarthy, 1988:52.), it is important to understand what factors affect word learnability - the ease or difficulty with which a word is learned. Carter and McCarthy (1988) claim that the difficulty of a word may result from several factors, including: a) the relations each word has with other words both in the target and also in the mother language; b) its being taught productively or receptively; c) its polysemy; d) the nature of the learning context; e) language-internal difficulties such as the word-form.

Laufer (1997) goes further and points out important factors a teacher should be aware of when teaching vocabulary: a) length, where longer words might be more difficult to learn than short ones; b) morphology, since the multiplicity of forms - irregularities of plural, genre and noun cases, cause an overload in the learning; c) synformy, where the similarity of words may confuse the learner; d) part of speech, where nouns seem to be the easiest, adverbs the most difficult, and verbs and adjectives are in between; e) abstract and concrete words which, in the case of second or foreign language acquisition, might not impose any difference, since it may involve only the learning of new linguistic forms; f) specificity and register, where general and neutral words that can be used in many contexts and registers are less problematic; g) idiomaticity, since idiomatic expressions are more difficult to understand and to learn than non-idiomatic expressions, being among the main pitfalls in reading comprehension (Bensoussan & Laufer, cited in Laufer, 1997); h) multiple meaning,

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[2] Collocation is part of the meaning of a word and is related to the notion of a word's behavior in the syntagmatic ax, that is, the notion of which other words a given word can be used with.

since there is the problem of polysemy of words and also of distinguishing polysemy from homonymy [3].

## 2.3 VOCABULARY AND READING

### 2.3.1   THE ROLE OF VOCABULARY KNOWLEDGE IN READING

The relationship of vocabulary knowledge to reading has been the subject of a great deal of research. Nation and Coady (1988) have reviewed the relevant research on the issue and have found that vocabulary knowledge plays a very important role in reading comprehension.

However, the different models proposed to account for the reading comprehension phenomenon attribute different importance to vocabulary knowledge. The three most prevailing models proposed are Gough's bottom-up model, Goodman's top-down model, and Rumelhart's interactive model (Davies, 1995).

Gough (1972 cited in Davies, 1995) characterizes reading as a bottom-up information process, that is, a word by word decoding, a "letter-by-letter progression through text, with letter identification followed by the identification of the sounds of the letters until words, their syntactic features and then meanings are finally accessed" (Davies, 1995, p. 60). Vocabulary knowledge was, then, essential for the reading. The reader extracted all the information from the printed words, and contributed with nothing as if he/she were an 'empty box'.

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[3] Polysemy is the property of words for having many possible different meanings related to the same semantic field. Homonymy is when two different words from different origins are converged historically to the same linguistic form. They are distinguishable only based on their etymology.

Goodman (1976), on the other hand, proposes his top-down model, contending that reading is a psycholinguistic guessing game where meaning does not come from the printed words alone. Goodman's model places emphasis on higher order sources of information, where prediction has an important role, based on the reader's knowledge of both the subject matter and the world. Prediction, guessing of unknown words and grasping the general idea are important factors for reading comprehension.

A set of strategies for lexical inference[4] based on contextual clues, cognate words, suffixes and prefixes, text organization devices such as connectives is taught. The strategies of skimming, scanning and even skipping are taught too. Vocabulary knowledge was not so important, since, according to this model, readers could read a text despite their poor vocabulary knowledge, being able to grasp the meaning of the text based on some linguistic and extra-linguist clues.

However, guessing from context may not be so effective. Morrison (1994, cited in Morrison, 1996) investigated the use of guessing strategies in reading comprehension and found that the high proficiency readers had about 60% of correct guesses of unfamiliar words and that low proficiency readers could guess correctly only 25% of the unfamiliar words. Nation and Coady (1988) claim that guessing using contextual clues will work if the context is understandable, with low frequency of unknown words.

Also, there is the problem of vague comprehension resulting from guessing meanings based on context clues and from the use of the skimming and skipping procedures. Davies (1995) claim that reading for pleasure might tolerate a certain degree of skipping and skimming, but reading for learning of content or procedures, as

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[4] Morrison (1996) defines inference as an 'informed guessing' in opposition to 'wild' guessing which occurs "when learners do not make use of relevant information in their guesses, either because this information is unavailable or because they do not know how to retrieve and use it. " (p. 42)

it is the case of students at the university, "requires slower reading, reading in depth, and time for reflection" (p. 134), which demand vocabulary knowledge.

Based on his laboratory research, Rumelhart (1977) found that the reading process involves the application of all knowledge sources and proposed an interactive model, through which the reader "is seen to be able to draw simultaneously, but selectively, upon a range of sources of information: visual, orthographic, lexical, semantic, syntactic and schematic" (Davies, 1995, p. 64).

Following the same line of reasoning as Rumelhart, Eskey (1988) claims that reading in a second language actually requires more linguistic knowledge than has been recognized and more than the "guessing-game metaphor seems to imply" (p. 94). Recognizing the limits of the two previous models treated separately, the author states that learners have to be assisted in both kinds of knowledge to become good readers: "to properly achieve both [fluency and accuracy], developing readers must therefore work at perfecting both their bottom-up recognition skills and their top-down interpretation strategies" (p. 95).

Eskey (ibid.) also proposes an interactive model, which is characterized as the flow of information coming from the text and also from the reader, i.e., both the text and the reader contribute to the construction of meaning. To the author, interactive refers to: the interaction between information provided by means of bottom-up decoding and information provided by means of top-down analysis, both of which depend on certain kinds of prior knowledge and certain kinds of information-processing skills (p. 96).

In fact, Day and Bamford (1998) have shown us that fluent reading depends on automatic word recognition, called by the authors *sight vocabulary*, since it "frees up the mind to use several simultaneous processes involving reasoning, knowledge of the world, and knowledge of the topic to construct meaning" (p. 12), that is, involving the

higher-order processes of comprehension that are demanding in terms of attention (Samuels, 1994, cited in Day & Bamford, 1998).

Gough's bottom-up model for reading fell into discredit since it was proved by the proponents of the top-down model that reading is much more than a word by word decoding. Goodman's model, in turn, proposed for reading in L1 where identification of words and decoding is automatic, has been shown inadequate, and its use for dealing with second or foreign language reading has been duly criticized (Eskey, ibid.). In second language reading, readers lack linguistic knowledge, especially vocabulary knowledge, and, when trying to guess word meanings using top-down oriented strategies, they may not be able to find the clues in the text to guess the meaning of words correctly: "a reader with poor linguistic knowledge can neither instantiate schemata nor check the hypothesis he/she builds while reading" (Braga & Busnardo, mimeo, p. 17).

Understanding that reading is much more than the bottom-up model and top-down model have separately predicted, I believe that an interactive model that implies a constant interaction between bottom-up and top-down processing in reading is more adequate to describe the reading process, since, according to Eskey (ibid.), fluent reading entails "bottom-up perceptual and linguistic skills as well as higher-order cognitive processes" (p. 96).

Vocabulary knowledge is crucial for second or foreign language reading, and each word, in particular, is important, since "each word contributes to the interpretation of the other words that are near it" and that the "images from all of the words in a sentence (or larger context) combine to produce a meaning for the whole" (Stevick, 1982, p. 45).

Automatic vocabulary recognition is also crucial for second or foreign language reading. Working memory capacity is limited in terms of holding information (Tomitch,

1996, in press) and, if readers take too long to recognize words in a sentence, meaning construction, and, therefore, comprehension, is severely disrupted (Day & Bamford, 1998).

## 2.3.2   READING FOR VOCABULARY KNOWLEDGE: ASPECTS TO CONSIDER

Since research "leaves us in little doubt about the importance of vocabulary knowledge for reading" (Nation & Coady, 1988, p. 108), and because I consider the interactive approach to reading to be more adequate to account for the reading process, which, as we have seen in the previous section, relies upon vocabulary knowledge, this session aims at discussing the value of reading as a means of increasing vocabulary knowledge. The question that arises is: can vocabulary learning be a result of natural and massive reading alone, i.e., of unconscious or implicit process of vocabulary learning through context, or does it require conscious or explicit learning?

Following his natural approach, Krashen (1989) claims that vocabulary learning is "most efficiently attained by comprehensible input in the form of reading" (p. 440), which means that focusing on the message, on the meaning of the text will lead to vocabulary learning. Vocabulary learning is, therefore, the result of implicit or incidental learning through massive reading, in which the reader has to cope with the reading task by guessing the meaning of unknown words. This approach is consistent with the top-down model of reading.

Guessing the meaning of a word is part of the reading process, but not sufficient for vocabulary learning. Making a distinction between getting the meaning of a new word from the use of contextual clues and the learning of the new word, i.e. storing it in memory, Sökmen (1997), based on research findings, confirms that guessing the

meaning of unfamiliar words is not necessarily the same process involved in storing the unfamiliar word in memory (p. 238). The author provides evidence that implicit vocabulary instruction alone will not necessarily lead to learning and cites Haynes 1993's and Coady 1993's research that "points to the ineffectiveness of just using implicit vocabulary instruction and the need to accompany it with a much stronger word level or bottom up approach than had been previously advocated" (p. 239).

Braga and Busnardo (mimeo) question Krashen's assertion that reading for meaning leads to basic language acquisition, and argue against his natural approach to learning. The authors, based on findings of their research with students enrolled in foreign language reading courses in Brazil, draw our attention to the fact that Brazilian students are in a non-immersion situation, in a classroom of foreign language teaching situation which differs from that described by Krashen. They claim that the reader with poor linguistic knowledge "does not progress 'naturally' in the direction of language proficiency through exposure to input alone" (p. 3).

Another aspect to be considered is that vocabulary learning through reading depends on the process of inferring the meaning of new words, and inference in context is a "lengthy and error prone undertaking which, by itself, is an inefficient way of mastering second language vocabulary" (Harley et all, 1996, p. 281) because it is hindered by factors such as rare encounters with specific words, contextual clues that are either misleading, intrinsically unhelpful or beyond the learner's linguistic knowledge.

All this leads us to consider whether teachers should rely on implicit vocabulary learning, in which they would deal with reading very much the same way as top-down-

oriented reading courses[5], or, promote explicit vocabulary instruction, in case he/she believes instruction may assist language learning. The next session will tackle the issue of teacher's intervention and instruction.

## 2.4 VOCABULARY INSTRUCTION: INSIGHTS FROM RESEARCH ON LANGUAGE LEARNING

### 2.4.1 IMPLICIT VERSUS EXPLICIT TEACHING

Vocabulary development is not a field of study on its own. Thus, the issue of vocabulary instruction is related to the understanding of how languages are learned. Approaches to language learning have been proposed: the natural approach, on which implicit teaching is based, and instructional approaches, on which explicit teaching to develop language awareness is based.

Krashen (1989), following his natural approach, claims that "vocabulary and spelling are acquired in fundamentally the same way as the rest of language is acquired" (p. 440), that is, subconsciously, by natural exposition, when the conscious focus is on the message, not on the form. In the Natural Approach, students are exposed to the target language (TL) and take their time acquiring it naturally. The teacher is a source of the TL and implements little systematic teaching.

Krashen's Natural Approach claims that "adults have two distinct and independent ways of developing competence in a second language" (1982, p.10). Acquisition is a subconscious process, very similar, if not identical, to the way children

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[5] Scaramucci (1995) claims that the ESP reading courses in Brazil seem to be grounded on the top-down model of reading.

acquire their first language (L1): "second language acquirers, child or adult, is also an 'acquirer', just like the child acquiring first language" (1982, p. 24).

L2 acquisition requires natural communication in which "speakers are concerned not with the form of their utterances but with the messages they are conveying and understanding" (1981, p.1). Acquisition, then, involves only the Language Acquisition Device (LAD): "adults can access the same natural 'language acquisition device' that children use" (1982, p.10). Learning, on the other hand, is the result of error correction, or of presentation of explicit rules of the language. Since it is a conscious process, it involves cognitive structures outside the LAD.

Krashen's input hypothesis claims that language development occurs when the acquirer, engaged in natural communication focusing on the message, understands the new input: "the child understands first, and this helps him to acquire languages" (1982, p.23). To the author, "the goal of our pedagogy should be to encourage acquisition" (1982, p.20) which, ultimately, means to provide comprehensible input without really giving formal instruction, just awaiting the acquirer to follow successfully without intervention.

Gregg (1984), examining Krashen's Monitor Model and its underlying principles, points out that the LAD is intended to "describe the child's initial state, before being presented with primary linguistic data" (p. 80). The author claims that there is hardly a way in which the LAD can be applied to adults, since they are not in an initial state and are endowed with a much richer set of cognitive structures, which allows them to violate the constraints of Universal Grammar. The author also points out that Krashen has not shown that "presentation of rules, explanation, etc. cannot facilitate the acquisition of a second language, which is the very strong claim that he is making" (p. 82).

Long (1983), pursuing the question *Does instruction make a difference?*, reviewed the existing research which compares the results of second language acquisition in situations with instruction only, exposure only, and a mix of exposure and instruction. The author came to a conclusion running contrary to the propositions of Krashen's model. He concluded that there is enough evidence that instruction is beneficial for children as well as adults; for beginners, intermediate and advanced students; on integrative as well as discrete-point tests; and in acquisition-rich and acquisition-poor environment (p. 374).

Sharwood Smith (1981) stresses the importance of developing explicit knowledge in terms of what he calls language consciousness-raising. To the author, consciousness-raising means providing relevant information that can vary in the degree of elaboration or conciseness of presentation and of explicitness or intensity of attention. In short, the teacher's guidance - a short cut or a ready-made a priory explanation - can take "more or less time or space and it can be more or less direct and explicit" (p. 161).

Although natural exposure leads to language learning, as suggested by Krashen in his Natural Approach, I believe that it is not enough, especially for adults learning a foreign language with very few opportunities for exposure to the target language. Thus, a more balanced and integrated approach to language learning should be adopted, through which learners are exposed naturally to the language, as well as assisted with explicit and direct teaching aimed at developing the learners' explicit knowledge of the second language.

As for vocabulary teaching, the same more balanced and integrated approach involving direct and indirect methods should be adopted for vocabulary teaching, since it has been claimed that a combination of direct and indirect strategies for vocabulary

learning is the most effective (Gu & Johnson, 1996), and, therefore, most adequate to assist the learners in their process of learning second language vocabulary.

## 2.4.2 FACTORS ENHANCING MEMORIZATION

Language learning involves memorization, i.e., the storage of the new information. McLaughlin (1978) claims that learning is the transfer of information from short term memory to long term memory. Rubin (1987, cited in Schmitt and McCarthy, 1997, p. 29) defines learning as the "process by which information is obtained, stored, retrieved, and used". O'Dell (1997, in Schmitt and McCarthy, 1997) confirms that memory does play an important role in vocabulary learning.

Being consistent with his natural approach for second language pedagogy, Krashen (1982) claims that "vocabulary naturally acquired is more persistent and more likely to be remembered than is vocabulary that is explicitly learned through memorization or dictionary use" (pp. 80, 81).

The natural acquisition of second language vocabulary may lead to more persistent storage and more likelihood of retrieval as Krashen has claimed, although some research shows otherwise (Qian, 1996). However, as to foreign language learning, it is not so simple a question. Remembering is an aspect of memorization. Memorizing foreign language vocabulary is not simple for adults, especially due to the very infrequent opportunities for exposure to the language.

Krashen seems to ignore the research done on memorization, which challenges his view. Carter and McCarthy (1988) point out that the general principle for vocabulary learning accepted among researchers in the field of memorization is that "the more words are analyzed or are enriched by imagistic and other associations, the more likely

it is that they will be retained" (p. 12). Based on this principle, teachers might create saliency of the vocabulary to be learned, both planned and unplanned, which means to somehow focus attention on the word, review it regularly, and process its meaning (semantic as well as syntactic features) as deep as possible, resorting to the organizational storage power of memory.

Stressing the importance of regular review, Stevick (1976) claims that mere exposure to input is not enough because there is a period of time that the input is available for re-examination, after which teachers should not expect their students to remember it unless something is done with it, that is, unless the students did "more with it than simply heard it" (p. 13).

Stevick (1982) has found that new input stays in the short-term memory (STM) for a short time, about 20 to 30 seconds without being repeated. The amount of work the learner's mind does on the new input will determine whether or not it goes to long-term memory (LTM). Whether the new input makes it to the LTM, says the author, is "pretty much a matter of frequency and intensity" (p. 30), that is, how many times and how hard the input is worked upon.

Concerning frequency, Stevick makes a distinction between 'massed practice' and 'distributed practice', claiming that the latter is a more effective practice since experiments have shown that the students are more likely to retain an item by exposures interrupted with other items than exposure in one bunch. This claim argues for regular revision of the new item distributed over a period of time.

The passage to the permanent memory (PM) is related to intensity, which involves emotional depth at which the new item touches the learner, and the cognitive breadth of the associations that the material finds in the learner's mind.

Stevick (1982) proposes a description of the process of learning a new word, which involves guessing its meaning in the context and storing the information in memory. The result of the first meeting with a word is the image of its place among the others and among the images they bring with them[6]. The image is associated with neurochemical changes in the brain that remain available for a certain time. In the next encounter, the word will bring the stored information to the understanding of the new context. The new image will include the second occurrence.

The author claims that, as the process is repeated, the response to the word is quicker and more accurate. Arguing that the interval of successive occurrences should be well balanced so as to activate the neurochemical image and trace, the author stresses that:

> ...if these intervals are too short, the learner can come out with the necessary performance by relying on no competence except the general ability to echo recent words. If the intervals are too long, much of the benefit of the earlier images will be lost, and each production of the new word will be almost as much as if the word were completely new (p. 49).

In the case of foreign language teaching and learning, our context in Brazil, where opportunities of natural exposure to and use of the target language are rare, readers may not encounter the same word, especially infrequent words, in due time, or with due frequency, to guarantee the commitment of the new information to LTM. The role of the teacher designing pedagogical procedures to deal with the new vocabulary is, therefore, essential.

Besides regular intervals, meaning processing plays a role in memorization. Craik and Lockhart (l972) discuss the levels of external information processing - word, sound, images and smell - that lead to the retention in memory and propose what they

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[6] Stevick (1982) says that a word is like pictures, sound, smell and taste, and brings back whole images of what it has been part of in the past. In the case of the word, it will bring the images provided by the

call 'depth of processing', where the early stages focus on the physical features of the input whereas the later stages are related to the association of this information to the background information of the learner. It means that a greater depth of processing implies a greater semantic and cognitive analysis.

The authors claim that retention is a function of the depth of analysis. Processing that involves a deeper analysis should result in better memorization. Various aspects contribute to this sort of processing, such as quantity of attention to the stimulus, length of processing, and compatibility to the existing analysis structures. At the deepest level, the learner may use learned rules and existing knowledge to deal with the information more effectively, allowing for better retention. The levels of processing must be seen as a continuum of analysis - from sensorial analysis to highly durable products of semantic-associative operations.

Stressing the importance of analysis for vocabulary learning, Cohen (1990), claims that "if you really want to learn words, it pays to analyze and enrich them by associations or images – the 'depth of processing' principle." (p. 22).

Craik and Tulving (1975) have shown that not all kinds of information are processed in the same way and different processing leads to different results in terms of retention. The authors found in their study that "retention depends critically on the qualitative nature of the encoding operations performed - a minimal semantic analysis is more beneficial for memory than an elaborate structural analysis" (p. 291).

Claiming that the semantic field approach is more effective and efficient in terms of vocabulary learning than incidental learning through exposure only, Crow and Quigley (1985) found that "long-term retention of information that has been organized

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nearby words to the whole interpretation of the context.

into some type of cognitive categories is superior to retention than randomly presented material" (p. 510).

Baddeley (1990) characterizes the relationship between human learning and memory as dependent on organization. The author claims that organization is important at three levels: 1) existing organization in LTM; 2) organization to be perceived or generated within the material to be learned; and, 3) organization linking both.

Based on his research and review of different studies in the area, the author concludes that there is enough evidence to indicate that "the more organized the material, the easier it is to learn, that subjects spontaneously tend to impose organization on random material, and finally that explicit instruction to organize enhance learning" (p. 199).

Thus, since learning involves commitment of information to memory, and that research in the field of memorization seems to show the importance of a) review of new information at specific time intervals, b) analysis, deep processing and association, c) organization of the material to be learned, I conclude that teachers should design their courses and pedagogical procedures taking all these aspects into consideration. This means that vocabulary teaching requires much more than just exposure to the new words – it requires systematization.

## 2.5 GENERAL PROCEDURES FOR VOCABULARY INSTRUCTION

In the previous sections, considerable evidence has been presented in favor of including explicit instruction for language learning in general, and more specifically for vocabulary learning. It follows that teachers should be aware of procedures to assist their students, especially beginners, to learn vocabulary.

Carter and McCarthy (1988) review the most important parts of a collection of papers under the title *Guidelines for Vocabulary Teaching in 1980*, in which Dorothy Brown outlines 'eight Cs and a G' of vocabulary teaching: 1) collocation; 2) clines (scales such as cold/warm/hot expressed diagrammatically); 3) clusters; 4) cloze procedure; 5) context, by using word analysis and inference; 6) consultation, by using the dictionary; 7) cards, in which students keep index of vocabulary; 8) creativity, for students to describe pictures; and 9) guessing.

Brown and Payne (1994, cited in Hatch and Brown, 1995) propose five essential steps for learning new words that must be observed by teachers, which can be summarized as follows:

1. having sources for encountering the new words: texts, labels, word lists and dictionaries;

2. getting the word form, i.e., a clear image, either visual or auditory or both, for the form of the new words;

3. getting the word meaning, i.e., learning the meaning of the words, quite general for beginners, and redefined and more specific for advanced learners, by guessing based on clues present in the text, by using the dictionary, or by feature analysis;

4. consolidating word form and meaning in memory, i.e., making a strong memory connection between the forms and meanings of the words;

5. using the words, an attempt to keep words and meanings from fading from memory, a procedure which is not absolutely essential if the goal is purely receptive knowledge.

Based on Brown and Payne's five essential steps for learning new words, teachers might consider in their pedagogical procedures for vocabulary teaching: 1) the form and/or the source of presentation of the new words; 2) the activities done for

getting the meaning of the words; 3) work done for creation of memory links and retention of the word form and meaning.

The procedures for vocabulary instruction may occur in all the steps when the teacher:

1. selects the text, in terms of familiar subject matter to allow students to use top-down processing for inference of the meaning of both planned and unplanned new words, and also in terms of low new word density[7] to allow for bottom-up processing which also contributes to the comprehension of meaning of new words;

2. helps the students get the meaning of the new words, and also helps the students extend the polysemy of familiar words, such as *can* as a noun and *last* as a verb;

3. takes advantage of memorization techniques to assist retention, with the explicit intention of teaching vocabulary.

## 2.5.1   SOURCE OF PRESENTATION: TEXT SELECTION

The Communicative Movement proposed that texts selected for language teaching should be authentic. The definition for authentic at the time was "materials written by and for native speakers and not specifically written for language teaching" (Day & Bamford, 1998, p. 54).

This idea of using authentic materials has had, ever since, a very strong influence on language teachers, particularly on those teachers who teach reading courses. It has become "almost a categorical imperative, a moral *sine qua non* of the language classroom" (Clarke, 1989, cited in Day & Bamford, 1998, p. 55).

ESP reading courses in Brazil have received the same influence towards selecting authentic texts for the students. ESP reading teachers seem to choose to facilitate reading tasks by asking simple questions as well as presenting the students with a set of reading strategies such as skimming, scanning and word skipping.

Widdowson (1978) brought up the issue of using authentic texts for language teaching. Commenting about the procedures and text used at the time by teachers when dealing with reading, the author claims that the texts had structural grading aimed at consolidating the new knowledge, both structure and vocabulary, and, in the end, were used to exhibit instances of language with the consequence of losing their power as discourse as well as their authenticity[8].

Aiming at evaluating the authenticity of texts used by teachers, Widdowson distinguishes three types of text: extracts, simplified versions and simple accounts. Extracts are pieces of genuine and authentic discourse, real instances of use. The author points out problems in the use of extracts, since they are extracted from bigger communicative units and then introduced in an isolated unnatural way, which, to him, reduces their authenticity. Simplified versions are derived from texts by a process of lexical and syntactic adjustment to the reader's linguistic competence, in which the focus is unnaturally on the language, not on the discourse. It is not a "genuine discourse, it is a contrivance for teaching language" (p. 89).

Simple accounts refer to a real reformulation of the propositional and illocutionary development, which presents information from various sources in a totally new discourse, addressed to specific readers with specific background knowledge.

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[7] New word density is defined as the ratio between known words and unknown words present in a text.
[8] A distinction seems to be important here. There are authentic texts, and also authentic use for texts. Jordan (1997) points out that authenticity is related to language data, but also related to the purpose or task involving the text. Widdowson seems to be defending primarily the authentic use of texts, that is, reading as communication, which implies, for him, the use of authentic texts.

Simple accounts are "genuine instances of discourse, designed to meet a communicative purpose, directed at people playing their roles in the normal social context" (p. 89). The specific readers he refers to are children or adolescents.

To the author, any type of text presented with the objective of developing reading skills, on one hand, has to "engage the learner's interest and impress him as being in some way relevant to his concern, and on the other hand, be pitched at an appropriate level of linguistic difficulty" (p. 91). This may refer to second language learners' linguistic proficiency.

Considering the students' level of proficiency to choose a text, however, does not seem to be the concern of the ESP teachers in Brazil, since it is part of their approach to use authentic texts such as menus, labels, advertisements, newspaper or magazine articles, where neither the vocabulary nor the language structures are simplified or sequenced in any way.

The use of authentic texts, however, might lead to comprehension problems for students, since authentic materials might be "those which are impossible or difficult for language learners to understand" (Day & Bamford, 1998, p. 55).

Pointing out that when a great deal of vocabulary is unknown to the student, that is, when the text is beyond their language proficiency level, they become overwhelmed and frustrated, Aebersold and Field (1997) claim that it is important "to avoid the frustration and despair that arise from constantly being required to tackle L2/FL reading texts that are far beyond one's language competence" (p. 27-8). The authors add that when students are reading texts within their language proficiency range, they will understand the general topic and ideas, and several details, which is, of course, the only way possible to infer the meaning of unknown vocabulary, tackle with the text and, eventually, learn vocabulary.

Based on his research finding that shows the importance of text selection of a specific subject area and at an appropriate level, Ridgway (1997) claims that the use of topic-specific knowledge in reading comprehension as a compensatory strategy depends on the reader's linguistic proficiency in relation to the text: if the reader's linguistic level is below the threshold level, the compensatory strategy short-circuits, that is, the "poor linguistic proficiency in relation to the text will prevent the reader from making any use of their background knowledge in the interpretation of the text" (p. 155).

Scaramucci (1995) shows the importance of a well-developed lexical competence for reading comprehension. The author found that beginners and intermediate readers were confused about similar words, had difficulties in lexical inference, and had a distorted text meaning construction due to the great amount of incorrect guesses and non-guessed word gaps.

Scaramucci's research findings show that when automatic processing does not happen due to poor linguistic knowledge, the readers adopt a more controlled word decoding to be able to read, involving all the reader's resources, and resulting in an overload of the processing capacity, which prevents the reader from using the resources for the construction of meaning of the text or for processing at a higher level (p. 258).

Day and Bamford (1998) point out that the development of sight vocabulary (automatically recalled) is possible if the "bulk of vocabulary and grammar is well within the reader's competence" (p. 17), without too many distractions resulting from encountering too many unknown words.

Criticizing Widdowson for having a "sharp eye for dichotomies" (p. 57) when the author divides texts into *simple account* and *simplified version*, and commenting that there is still a confusion concerning the definition for authentic, Day and Bamford claim that "simplified and authentic are not mutually exclusive opposites" (p. 59), and propose

a fusion of authenticity and simplicity, where texts "combine the desired features of authentic texts (their authenticity) and simplified texts (their simplicity) - in other words, texts that are both authentic and appropriately simple" (p. 58).

The authors further claim that simplification is "no more than a term - even a somewhat insulting term - to refer to writing for language learners..." (p. 61) and, pointing out that second language learners need material especially written for them, they propose what they call *language learner literature.*

This material should have communicative intent, being a "fully realized, complete-in-itself act of communication between author and audience" (p. 64), and be written for an identifiable audience of second language learners, therefore, authentic. At the same time, it should be appropriately simple in language and concept, respecting the special characteristics of readers of limited language ability and unfamiliar with concepts and topics common in the target language and with particular culture-specific text types.

Using authentic texts without considering the reader's linguistic knowledge may cause readers to have too many doubts, as well as too much distraction, and may force them to focus on the linguistic code with a consequent overload on short-term memory in a way that they will not be able to cope with the reading task or even use their strategies to infer meaning.

I claim that, when selecting a text, teachers should have clear pedagogic purposes in terms of course syllabus and should introduce texts only upon evaluation of students' linguistic proficiency and their progress over the reading course. Widdowson's simple accounts addressed to an audience of language learners, or Day and Bamford's language learner literature, written within reader's linguistic proficiency, may be a possible solution in terms of more adequate text selection, since they allow for reading

comprehension and new word meaning inference in a way that may lead to word learning.

## 2.5.2   GETTING THE MEANING OF NEW WORDS

Vocabulary may be presented: a) inside context, that is, in texts; b) outside context in lists, glosses and pre-reading or post-reading activities in general; and c) both inside and outside context.

Presenting vocabulary in contexts allows for the learner to retain not just the referential meaning of the words, but also to retain "the syntactic, pragmatic, and even the emotional information from their context" (Gu & Johnson, 1996, p. 646). On the other hand, it has not been demonstrated that the "information learners obtain from meeting words in a variety of contexts is more beneficial, either in terms of knowledge of forms or meanings of lexical items, than either translation or simply looking up the words in a dictionary" (Carter and McCarthy, 1988, p. 15).

Thus, a mixture of approaches may be adopted, i.e., presentation of words both in and out of contexts, in such a way that teachers can exploit the advantages of both approaches. Pre- and/or post-reading activities may be used so that teachers allow for the referential, syntactic and pragmatic information to be understood, as well as create saliency of the words chosen to be taught.

Gairns and Redman (1986) suggest some procedures the teacher may use to present meaning or help students get the meaning of new words. They are: visual techniques, verbal techniques, translation, asking others, contextual guesswork and dictionary use.

Visual techniques include flashcards, photographs, blackboard drawings, wallcharts and realia (real objects), and are particularly useful to present items of vocabulary such as food, furniture, professions, places, descriptions, actions and activities. Mime and gesture are useful to present items such as *swerve* and other enactable verbs.

Verbal techniques are useful to explain more abstract concepts and include illustrative situations, synonymy and definition, contrasts and opposites, scales (e.g. never, sometimes and always) and examples.

Translations can be a very effective way of conveying meaning, saving time spent on unsuccessful explanation of the meaning of L2 words. According to the authors, translation is not a less exact technique when compared to English synonyms and definitions, since they all may convey inexact meanings.

Asking others can be effective once the teacher provides a task, e.g. group reading, and groups students, monitors carefully to clarify meaning, supplies the correct answer when necessary, and provides a final feedback session to ensure the activity has been effective in supplying accurate information.

Contextual guesswork involves the use of context to derive an idea of the unknown word's meaning, and is a valuable skill in textual exploitation in the classroom.

Gairns and Redman's contextual guesswork seems to be an essential procedure in reading. I shall, therefore, concentrate on this procedure. Nation and Coady (1988) suggest a five-step strategy to help teachers assist their students in getting the meaning from context, which they consider to be a major, but necessary, interruption of the reading process until learners are familiarized with the steps. They are: 1) find the part of speech of the unknown word; 2) look at the immediate context and simplify it if

necessary; 3) look at the wider context, pursuing the relationship between the clause and the unknown word; 4) guess the meaning; 5) check whether the guess is correct.

Guessing vocabulary from context is the most frequent way we discover meaning of new words. Guesses are guided by contextual clues: a) topic and title which give clues of what we are to read; b) grammatical structure; c) punctuation; d) parallelism; e) anaphora; and f) other words, in the redundancy of discourse.

Clarke and Silberstein (1977, cited in Nattinger, 1988) provide types of contextual clues that help to find the meaning of an unfamiliar word: a) synonym in apposition: 'Our uncle was a *nomad*, an incurable wanderer who never could stay in one place'; b) antonym: 'While the aunt loved Marty deeply, she absolutely *despised* his twin brother Smarty'; c) cause and effect: 'By surrounding the protesters with armed policemen, and by arresting the leaders of the movement, the rebellion was effectively *quashed*'; d) association between an object and its purpose or use: 'The scientist removed the *treatise* from the shelf and began to read'; e) description: 'Tom received a new *roadster* for his birthday. It is a sports model, red with white interior and bucket seats, capable of reaching speeds of more than 150 mph'; e) example: 'Mary can be quite *gauche*; yesterday she blew her nose on the new linen tablecloth'; f) word morphology through lists of stems and affixes with their meanings for the students to memorize.

Gairns and Redman (1986) emphasize that guesswork should not be used when the context is inadequate, that is, when "the target item is surrounded by additional items which may be unknown or only partially known to the students" (p. 84). Guessing by using contextual clues should, therefore, be carefully introduced and instructed by the teacher, demanding evaluation of learners' proficiency level, and expertise on the part of the teacher, since learners must have sufficient command of vocabulary,

grammar and reading skills to achieve enough comprehension of the whole text to be able to suggest and confirm guesses.

Gairns and Redman's last item of procedures to present meaning is through dictionary use. The authors point out that the advantages are that it provides valuable support as a backup to contextual guesswork and gives the learner considerable autonomy to continue learning outside the classroom. Corroborating the authors' view, Summers (1988) claims that dictionary use provides students with "further exposures for the word in other contexts, with different collocates and constructions, by making the student think about the word in relation both to the passage being read and the dictionary information" (Summers, 1988, p. 116).

Both bilingual and monolingual dictionaries should help in getting the meaning of words. Hatch and Brown (1995), based on research findings, concluded that there seems to be a natural progression in types of dictionary learners prefer, going "from picture dictionaries, to bilingual dictionaries, and then to monolingual dictionaries and thesauruses" (p. 383). This progression in the use of dictionary seems to solve the problem Gairns and Redman (ibid) brought up as to dictionary use, i.e., that the lexis used in the definition of monolingual dictionaries "may be just as difficult to understand as the target word he [the learner] is seeking to clarify..." (p. 43).

The monolingual dictionary is an important tool because it presents students with the meaning of the word within its specific context, and also the general meaning of the word, that is, the fixed area of the word meaning - what the word means archetypally (Summers, 1988).

2.5.3 MEMORIZATION PROCEDURES TO ASSIST THE RETENTION OF WORDS

Systematic procedures for retention of new information in memory may be good tools in language teaching, since research on memory seems to provide evidence that mere exposure to input is not enough, and that learners should do more with the new input than simply see it. This is especially true for foreign language learning in that the exposure to the new input is usually very infrequent.

Nattinger (1988) presents his review of techniques used to enhance memorization: a) loci – the image of the word in an imagined scene, e.g., the learner has to imagine a word's visual image interacting in the scene with all the objects in a familiar room or any familiar sequence; b) paired associates, use of associative bondings, e.g. associating *hard* and *rock*, so that *hard* would be stored together with the image of rock, and thus easier to recall; c) Key words – association of the target word with the sound of a word in the native language, and the meanings of the two words interacting; d) Craik and Lockhart's cognitive depth − students' engagement in answering questions provided by the teacher related to the word, under the principle that the deeper the decisions the superior the retention and recall, such as *what category does it belong to?*, or *Does it fit in the following sentence?*; e) word family - words in their family - the roots and the derivations, since clustering them aids the remembering of their general meaning; f) historical or orthographical similarities - associations based on either historical or orthographical similarities between the two languages, such as *attempt* and the Portuguese corresponding *tentativa* because of the three letters "T"; g) situational sets – association of words related to a particular situation; h) semantic sets -

group of words related to a particular semantic field, including synonyms, antonyms, superordinates, subordinates, etc.

Kasper (1993) defines the keyword method as a two-stage process. First, the student associates the spoken foreign word with the keyword in his/her mother tongue, which "sounds like some part of the foreign word, so this stage establishes an acoustic link between the two words" (p. 245). The student forms a mental image of the keyword interacting with the translation referent, thereby establishing an imagery link between the two words. For example, The English word *lack* sounds like *leque* and the image can be a woman feeling hot using the *leque* because of *lack of air*. It does not have to be a logical scene, since "bizarre images make the most effective associations" (Nattinger, 1988, p. 66).

In her book on language learning strategies, Oxford (1990) presents techniques for the retention of language input: a) grouping language material into meaningful units; b) associating new language information to concepts already in memory; c) placing new words into a context, such as meaningful sentences, conversation or story; d) using semantic mapping; e) using keywords with auditory and or visual links; f) representing sounds in memory in such a way that they can be linked with a target language word in order to remember it better; g) reviewing the target language material in carefully spaced intervals; h) acting out a new target language expression; i) using mechanical techniques, such as writing words on cards and moving cards from one stack to another.

Schmitt (1997) adds some suggestions for memory strategies that have, according to the author, been shown effective: a) pictures - pairing L2 words with pictures; b) imagery - associating L2 words with images created by the learner, usually associated with a personal experience; c) related words, with sense relationship, such as synonymy, antonymy, hyponymy; d) unrelated words, with no sense relationship, but

that rhyme; e) grouping words that belong to each meaning category, such as animals, names, etc; f) word's orthographical or phonological form focus facilitating the storage and recall; g) structural analysis such as word's affixes, root, and word class; h) paraphrasing, since it improves recall of the word because of the manipulation effort of it; i) analysis of the individual words of the multi-word chunks - phrases, idioms and proverbs; j) physical action following the presentation of the new word; k) semantic feature grids that illustrate the meaning or collocational differences between sets of similar words.

Some procedures designed for the student to use the newly learned words can also be useful to enhance memorization, such as cloze tests, flash cards and grouping. The cloze procedure involves the deletion of words from a text, which can be random or more directed to teaching specific language items, "regularly used to develop vocabulary" (Carter, 1988, p. 161). Flash cards are sets of cards in which the target word is written on one card, and on the other card the word(s) or ideas to be associated with it, i.e., the definition, synonym or the word in the native language. Grouping refers to arranging words together according to categories, such as nouns, verbs, function words, etc., or according to their semantic value, such as synonyms or antonyms.

In this chapter, I discussed various aspects involved in what Stanovich (1986, cited in Harley, 1995, p. 14) called the 'reciprocal causation' between vocabulary knowledge and reading, i.e., the important role vocabulary plays in reading comprehension, and the important role reading plays in vocabulary learning. Findings from research in the areas of reading and language teaching and learning were brought into play to shed some light on the discussion. Ultimately, I aimed at showing the important role teachers play in the whole process of vocabulary instruction when, in order to choose the procedures for vocabulary instruction having the text as a source,

they: a) consider what has been proposed in terms of vocabulary teaching through the different teaching methods; b) consider the aspects involved in knowing a word, such as the ease or difficulty of learning a word; c) consider implicit and explicit teaching procedures, taking into account the criteria for text selection, the suggestions for meaning presentation, and the research done on memorization.

**CHAPTER III**

**THE STUDY**

In this chapter, I aim to analyze the data collected in the light of the theoretical basis presented in the previous chapter and the steps for learning new words suggested by Brown and Payne (1994 cited in Hatch and Brown, 1995), concentrating on the procedures the teachers used for text selection, meaning presentation and vocabulary retention.

3.1. DESCRIPTION OF THE GENERAL PROCEDURES USED IN THE CLASSES OBSERVED

The research involved 03 ESP reading course teachers from the *Centro de Comunicação e Expressão - UFSC*. One of them taught in the Extra-curricular courses, and is referred to as Teacher 1. The other two taught in the Curricular courses, and are referred to as Teachers 2 and 3. They were selected at random, after considering some ESP reading teachers' availability, schedule, agreement and desire to take part in the research.

Data collection took place from November 1998 to March 1999. A total of six classes of 90 minutes each were observed in the case of teacher 1, five classes of 150 minutes each, in the case of teacher 2, and five classes, with 100 minutes each in the case of teacher 3. The initial data collection also involved 02 other teachers of reading and writing courses, who were soon disregarded since their classes focused on the speaking and writing skills.

All the classes were recorded, except for teacher 3's classes, since recording was not allowed by this teacher. In this case, note-taking was more detailed. There was an interview with each of the three teachers aimed at answering the research question concerning the criteria used for text selection. It was a semi-structured interview (Cohen, 1998)[9] , through which I also sought to investigate whether or not the teachers considered new word density when choosing a text. All three interviews were recorded.

A first analysis of the data showed that  Teachers 1 concentrated her classes on the development of the reading skill only, following the course syllabus. Teachers 2 and 3, on the other hand, concentrated on the development of the reading skill, but also worked with the development of the other skills, i.e., speaking, listening and writing. In the case of teacher 2, much classtime was dedicated to the development of those skills. In both cases, therefore, less data related to reading was collected.

For a comprehension of the analysis of the procedures concerning vocabulary teaching specifically, a general description of the procedures used by the three teachers involved during their classes is provided.

### 3.1.1  *Teacher 1*

Teacher 1 taught an English 2 Reading Course. There were an average of 10 students attending each class. The students were from different areas, but mainly from engineering. She spoke only Portuguese in class. She started her classes by presenting copies taken from different reading course books, easily identified since they were all paged and divided into units.

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[9] Cohen (1998) defines a semi-structured interview as a prompt through which the interviewer requests certain information from respondents whose exact shape is not predetermined. It allows researcher and learners to "pursue topics of interest which may not have been foreseen when the questions were originally drawn up". (p. 28)

The three texts used were part of three different units. I shall call them unit 1, unit 2 and unit 3 following the sequence of presentation to the students. Unit 1 (see Appendix 1) was based on a text called *Six Enviro-Myths You Can Stop Believing*, written by Robert M. Lilienfeld and Wiliam L. Rathje, published in *The New York Times*. Unit 2 (see Appendix 2) was based on a text called *The Greatest Movie Ever Made?*, whose author was not mentioned. Unit 3 was based on a text called *Families in Upheaval Worldwide*, written by Tamar Lewin, published in *New York Times Service*.

Units 1 and 3 included three pre-reading activities: 1- "Previewing the Article", whose aim was to give the students a brief idea of the subject matter of the text, activating their schemata; 2- "Before You Read", whose aim was to provide general questions for discussion, also to activate schemata, and to have readers to skim and scan the text for specific information; and 3- "As You Read", whose aim was to concentrate on some facts for reflection.

The work done with these three activities of unit 1 cannot be described, since the class in which the teacher dealt with them took place before the beginning of the research. In the case of the text from unit 3, the teacher went over the three activities and stimulated some discussion. She brought up the titles of the articles to explore their meanings in terms of what to expect from them. The word *upheaval* was unfamiliar to the students. The teacher asked them to look it up in the dictionary. They brought all meanings and, with the teacher's guidance, came to an understanding of the title.

Then the students were asked to read the texts individually or in groups. Students working in groups were resolving each other's doubts in terms of the structure and vocabulary for comprehension. They used the dictionary several times to look up unknown words. The teacher very rarely interfered or intervened to evaluate the reading progress or to check for doubts.

The post-reading activities came next. The first session was called "Getting the Message". It was a multiple-choice activity with statements to be completed based on the information the students could understand from the text.

When students had doubts concerning the words used in the activity, the teacher gave the translation or asked other students, who gave a translation too. Examples from unit 3 were the words *income*, *harmful* and the phrase *are likely*. Since all of them were present in the text which had been read minutes before, and some students did not guess from context, text comprehension may have been hindered.

When students had doubts concerning the answers given, the teacher went back to the text, identified the paragraph, and clarified them by translating to Portuguese both with and without students' contribution and discussion. During the discussion of one paragraph, two more doubts appeared. The word *awareness*, and the conjunction *instead of*. Because they could not understand the conjunction, they said they had understood quite the opposite of what the author had meant.

After the pre-reading activities, the units become somewhat different. Unit 1 had its second session, called "Expanding Your Vocabulary", divided into three different activities which students were asked to do in a row. Many students chose to use the dictionary instead of going back to the text for additional information on word meaning.

The first activity of the second session was "Getting Meaning From Context", designed for students to choose the best definition for eight words as they occurred in their contexts. Words such as *appalled*, *chagrined*, *overwhelm* and *glut* were given. The second was "Matching Opposites" which included eight words. Words such as *havoc*, *depleting*, *overindulging*, and *glib* were given. The third was "Practicing Useful Vocabulary", in which students had to fill in the blanks with four words out of all the words presented in the previous activity. Teacher asked the students to consider the

grammatical category for answering. The words chosen were *havoc*, *depleting*, *ideological* and *overindulging*.

Next step was called "Working with Idioms and Expressions", designed to provide the definition of thirteen idioms, expressions and topic-related terms which occurred in the text. The expression *give a hoot*, for example, was defined as *care about*, whose meaning students could not understand at first and had to ask; *figure out* was defined as *conclude* and *decide*, easier to understand since the definition words are cognates. As a follow-up activity, four sentences were presented to be filled in with four of the thirteen idioms and expressions introduced.

Unit 3, on the other hand, had its second session, "Expanding Your Vocabulary", divided into two activities. The teacher explained in Portuguese that the students were to do the two activities. Both were checked with some doubts resolved.

The first was designed to find the best definition for 8 words as they occurred in their context. Except for *pressing*, all the others were cognates, and did not require any further explanation. The second activity was designed to teach the students the prefixes in twelve words taken from the text. The prefixes were *co-*, *com-*, *demo-*, *ex-*, *non-*, *un-*, *poly-*, *pre-*, *uni-*.

The third session of Unit 3 was "Making Sense of Sentences", a two-choice activity designed to focus on and elucidate what the author considered to be the most difficult phrases of the text. Instructions were given in Portuguese, students took their time to do the activity in groups using the dictionary. The teacher went over the steps, commenting on the sources of problems, going back to the text whenever necessary, and solving the problems by reading aloud, explaining and, sometimes translating into Portuguese.

Unit 2 followed a different pattern. The first step was a pre-teaching of vocabulary, an explicit presentation of grammar words, of the modals, and of the formula to be used in the active and passive voices. The teacher talked about them, drew students' attention to some differences between *must do* and *must be done*.

Examples of use, exercises to make up sentences, and sentences to complete were provided. The teacher explained and students did the exercises with the help of their dictionaries, and the exercises were later checked, commented upon, and compared to Portuguese by the teacher.

Teacher and students started the work with the text by discussing a possible answer for the text title "The Greatest Movie Ever Made?". Students were, then, instructed to read the 8 true/false statements about the text designed to check comprehension. Students were asked to read the text silently.

Questions related to the text were presented, such as *where is Ronald Reagan originally from?*. A multiple-choice activity followed, in which readers were supposed to find the best alternative for the general idea of each paragraph. The teacher instructed the students that it could be done by eliminating the improbable choices.

There were, then, two exercises to fill in the blanks with the modal verbs. The sentences provided were not related among themselves, nor to the text. Additional activities, prepared by the teacher herself, were given for the students to fill in the blanks with missing words, some being the modals, in the lyrics of the song *As Time Goes By*, theme of the film *Casablanca*. Students were required to fill in blanks with the correct modal in six other sentences which were not related to the text or song.

3.1.2. *Teacher 2*

Teacher 2 taught an ESP 1 course for computer science students. The course is part of their regular curriculum. Five classes of 150 minutes were observed in the period from November 13th through December 11[th,] , 1998,  and resuming in February 12th through the 19th, 1999. He spoke some English in class. He had an average of 15 students attending each class. He adopted a book called "Infotech - English for Computer Users", by Cambridge, 1996, chosen due to the fact that it was within the students' area of study and presented activities involving the 4 skills of language use, all covered by the teacher during his classes. Class time was, then, divided into activities aiming at the development of all 4 skills.

The teacher started the first class observed by reviewing new vocabulary given in the previous classes. On the board, he wrote *to perform*, *cash dispenser*, *drug detecting tests*, *at incredible speed*, *output*, *wind*, *stopovers*, *however*, *labor*, *to handle*, *input*, *to store*, *string manipulation*.

The teacher and students went over the words and the teacher refreshed students' memories of the word meanings. Students could not remember many of them. The teacher proposed a game in which students would have to remember the word erased by its correspondent in Portuguese.

The teacher did a warm-up activity related to the text to be read, answering the question *what are some applications for computers*, and wrote a list on the board. Teacher, then, asked students to read the text *What Can Computers do?* (see Appendix 4) silently, and find out what new applications for computers the text added to their list. Students came up with some new applications, showing some understanding of the text, but also some misunderstandings, which were corrected by the teacher while they were reading the text aloud and translating it.

The teacher asked the students to read the text aloud, stopping them at the end of every sentence or every two or three sentences to check comprehension by asking them to translate. The meanings of expressions such as *picking up*, *spring to life*, *each time* and *tabula rasa*, and words such as *gadgets* were asked and answered by the teacher, resorting either to Portuguese or to an explanation in the target language, or exploring contextual clues for inference.

The second class observed (in which reading was dealt with), the teacher followed the same pattern; that is, he asked the students to read the text *Main Memory: RAM and ROM* (see Appendix 5) aloud, and went bit by bit, checking comprehension, challenging the students at some points, using definitions, synonyms, context clues and translation. A student asked the meaning of the word *therefore*, for which the teacher gave the translation and a brief explanation of the role of discourse markers in sentences.

There were two follow-up activities: one for which students had to read a list of seven features and decide which type of memory they referred to; the other was called Vocabulary Quiz with 10 questions, and was designed for a review of computation related words.

In the third class observed (in which reading was dealt with), there were five pre-reading questions designed to build and/or activate students' schemata. Since all questions were answered correctly, the teacher asked each student to read parts of the text *Units of Memory* (see Appendix 6) aloud, pausing at the end of each paragraph, checking doubts by explaining, giving synonyms or translating. The meanings of words and expressions such as *flowing through*, *upon*, *such as*, *in order to*, *avoid* and *informally* were asked and translation to Portuguese were given.

3.1.3. *Teacher 3*

Teacher 3 taught an English 1 Reading Course for medical school. Five classes were observed. She spoke mostly English in class. She had an average of 13 students attending each class. She brought different texts with different formats from different sources, since no book was adopted.

In the first class, the teacher presented the text whose title was *Colds and Flu: Time Only Sure Cure*, written by Tamar Noedenberg, taken from a site on the Internet. There was a warm-up activity related to the title and topic. Instructions were given for students to engage in silent reading.

The teacher read the text aloud asking, at the same time, if students had doubts. When she came to the word *overlooked*, the teacher paused and asked students if they knew it, and then explained it by giving examples. She continued, reading aloud to the end of the text.

The teacher asked if they had questions concerning new vocabulary. Students asked about the words *onset*, *malady*, *resemble* and the expression *knock-off-your-feet*. The teacher gave the translation or examples so that students could have a context from which to guess.

Some students were in charge of preparing the presentation of the text, that is, of presenting to the group the general idea of the text. Following the text, there were four activities: matching, marking true or false, crossword puzzle, and fill in the blanks. All of them were asked and answered in Portuguese.

The teacher started the second class by refreshing students' memory of the words learned in the previous classes. Next she did a pre-teaching of vocabulary by asking the students what they might find on medicine labels and gave them handouts with many such labels on them, and seven questions for them to scan for the required information.

The teacher checked all the answers and asked if students had questions concerning vocabulary.

In the third class, the teacher started by brainstorming about what pharmacology is all about. Words written on the board were: *effects*, *appropriacy* (indications and contra- indications), *side-effects*, *composition*, *cautions*.

A decision-making activity was given for students to choose the most adequate medicine to prescribe to 10 sick patients, choosing from the seven different medicines given with their characteristics.

She started checking the decisions by reading about the sick, and anticipating a question, she took the initiative and challenged the students concerning the word *due to*. Some students knew the meaning and some did not. A student answered *devido a* , and teacher provided orally other possible meaning of the word *due* by giving the example: *the baby is due in March*, and the translation *o bebe é para março*.  As the teacher went on, she showed the students other occurrences of *due to,* so as to review and confirm the meaning assigned to it.

Next, the teacher showed on an Over Head Projector (OHP) the first and introductory paragraph of a shodrt text entitled "The boy who came out from the cold", with the objective of practicing with the students predicting for stories. As she gave the rest of the story, she asked the students to underline the occurrences of the suffix *Ing*, and checked with them the meaning of the four occurrences.

Also on the OHP, the teacher showed another text entitled "Medical terms in plain English" prepared by Rita Charon, M.D., College of Physicians and Surgeons of Columbia University, whose aim was to teach students prefixes and suffixes used in English for diseases. The last activity aimed at getting the students to use their linguistic

knowledge to prescribe instructions for a very fat and sedentary man, used to the bad health habits.

The teacher started next class by giving a very brief warm-up activity on Cancer Treatment. A text written by Dennis Normile, published in *Science*, was presented for the students to engage in a silent reading. The post-reading activities were all in Portuguese, except for the last one, which was a word-finding puzzle. They were done and corrected in class.

A group of students was in charge of presenting the general idea of the text in Portuguese. After their presentation. the teacher took over and asked about doubts concerning vocabulary. As no student took the initiative, the teacher herself started challenging the students as to some more difficult expressions: *high-stakes*, *surrounding healthy tissues*, *ruled out*, and *hefty price tag*. The group in charge of presenting was able to answer.

In the following activity, students had to look at a picture and describe typical actions of a hospital by using the verbs given: *giving*, *fetching*, *bringing*, *passing*, *lending*, *pouring*, *showing*. The teacher explained the new vocabulary to the students by giving examples and translation.

Next activity was designed for students to read a text whose title was *How to Carry Out Resuscitation* (see Appendix 7). Students were asked to read silently. The teacher read aloud, pausing, checking the few doubts students asked.

Two post-reading activities followed. The first was a "Flow Chart" in which students had to fill in words from the text. The second was a "Guessing Words from Context" activity in which 9 sentences were taken from the text, each one containing an italicized word for students to match with the closest meaning in the other column.

3.2     CRITERIA FOR TEXT SELECTION

The criteria for text selection were checked through interviews done individually with each one of the three teachers and recorded on audiocassettes. The main research question was *what criteria do teachers use to select the texts or textbooks they use in their reading courses?* (see research question 1). In order to answer this question, I used a semi-structured interview (Cohen, 1998) through which I also sought to investigate whether or not the teachers considered new word density when choosing a text. I will present general criteria given by the teachers, and concentrate on the two main criteria mentioned by the three teachers involved, namely topic familiarity and authenticity. Also, I will relate these two latter criteria to vocabulary instruction.

3.2.1   *General criteria.*

Some general criteria mentioned by the teachers were: a) text size: small texts that fit into one page or 1 ½ pages at the most, so as to control the amount of reading and information; b) recency: recent issue of magazine and up-to-date topics, to stimulate motivation; c) relevance: texts related to the students' area of study to cater for their main interests[10]; d) genre: informative, so that students can learn from reading; e) structure: dynamic, with pictures, graphs and subdivisions to be more appealing to reading; and f) challenging, to involve students in a critical dialogue.

Grammar-teaching oriented texts is a criterion used by Teacher 1 for text selection; that is, texts are selected to illustrate a specific grammar point. In the interview, Teacher 1 said that, in the case of unit 2, she selected the text because it introduced one grammatical item present in her syllabus. In that case, the teacher didn't

select the text, but "selected the grammatical item and with the grammatical item came the text" (Teacher 1, in the interview).

### 3.2.2  *Topic familiarity*

All three teachers consider topic familiarity an essential criterion when choosing texts; that is, they choose texts which are within the students' area of study and background knowledge, and are aware of the advantage of using these texts as a way of activating students' schemata to facilitate text comprehension.

Teachers 2 and 3 chose texts which were exclusively within students' area of study, that is, computer science and medicine, respectively. In these cases, the very fact of using texts within the students' area of study may be sufficient to activate students' schemata. Teacher 1, in turn, chose three texts of general knowledge - environment, movies and family relationship - because she had students from different areas, which is characteristic of the extra-curricular courses at UFSC. In this case, the subject matter of the three texts was discussed before reading, which most probably helped in the building and/or activation of students' schemata on the subject, thus facilitating their comprehension.

As I have shown in chapter 2, the building and/or activation of students' schemata is a very helpful procedure in reading in a foreign language, since subject knowledge tends to compensate for lack of linguistic knowledge. This is considered a compensatory strategy (Ridgway, 1997): foreign readers use their background knowledge to compensate for "linguistic shortcomings, in order to arrive at a meaning" (p. 160).

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[10] Teacher 3 checks her students' main interests by doing a sort of needs analysis at the beginning of the courses.

Arriving at the meaning of the unknown words is a step in the direction of vocabulary learning. Choosing familiar subjects may, therefore, be a helpful procedure in vocabulary instruction, since vocabulary learning may be the result of the process of arriving at meanings by the use of background knowledge.

### 3.2.3  *Authenticity*

Authenticity is another criterion mentioned by the three teachers. Authentic material means, to the teachers, periodical magazines, *Time* magazine, articles from the internet, academic texts, abstracts, introduction to articles, summary of an article, newspaper articles, advertisements,  leaflets, song lyrics and magazine articles.

Authenticity has actually become imperative for ESP teachers as regards text selection (Clarke, 1989, cited in Day & Bamford, 1998, p. 55). It has not been different in Brazil in the ESP reading courses. Authentic materials have become a reference for ESP teachers as regards to text selection.

The three teachers involved in the research have distinct positions as to the use of authentic texts and the control of the new word density of the text in relation to the students' linguistic knowledge. Teacher 1 chooses preferably authentic texts for her students, although she may ignore authenticity when her main criterion is to choose texts with occurrences of the grammar point to be taught.

Authentic texts are texts written by and for native speakers (Day & Bamford, 1998). These materials usually have complex language, in terms of both lexical and grammatical elements, although they may be simple for literate and educated native speakers, who have their language automatized. The problem with the use of these materials for second language reading is that there may be a big gap between the threshold level in terms of linguistic knowledge required for the readers to be able to

read the text and their actual linguistic knowledge. Readers may lack the automatized linguistic knowledge necessary to make sense of the text, that is, the readers may not have the linguistic knowledge for bottom-up information processing.

In choosing authentic texts, teachers may overlook the appropriacy of the texts, in terms of new word density, to the students' level of proficiency, i.e., the text in relation to the reader's linguistic proficiency. In case the text is difficult for readers in terms of too high new word density, some problems arise: the first is that readers may not have enough sight vocabulary – automatic word recognition – which may hinder comprehension because of the limitations in working memory resources (Tomitch, 1996); second, which is dependent on the first, is that higher-order knowledge cannot be applied to compensate for the poor linguistic knowledge (Ridgway, 1997). Third, students may not be able to guess meaning of unknown words[11].

Teachers may provide the students with as much automatic vocabulary recognition as possible in order to avoid overload of memory capacity and allow for higher-order knowledge to be applied, which may entail better text comprehension, and ultimately, better guessing of unknown words.

This appropriacy seems to be overlooked in ESP courses when dealing with low proficient students, since their basic tenet is "simple tasks instead of simple texts". Teacher 1 seemed to be advocating this position when she described a very typical activity done in the very early stages for beginners, whose procedure is to get a text in some very unknown language and ask "very simple, very superficial questions about the text" (Teacher 1 in the interview), with the objective of showing the students that they can read despite their poor linguistic knowledge.

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[11] Gairns and Redman (1986) emphasize that guessing is not accomplished when "the target item is surrounded by additional items which may be unknown or only partially known to the students" (p. 84).

When asked in the interview whether or not she considered new word density as an item for text selection, Teacher 1 answered that she does not exclude a text because of the new word density, that she has never bothered about this, and that she even considers authentic texts "a bit of a challenge" (Teacher 1, in the interview).

This "bit of a challenge" may be a major problem for some students. Students may distort meaning construction resulting from insufficient lexical competence (Scaramucci, 1995), may not be able to make use of contextual clues for meaning inference when the target word is surrounded by unknown or only partially known words (Gairns & Redman, 1986), and may not be able to use topic-specific knowledge as a compensatory strategy, which depends on the reader's linguistic proficiency in relation to the text: below the threshold level, the compensatory strategy short-circuits, and prevents the reader from making any use of their background knowledge in the comprehension of the text (Ridgway, 1997).

Although little can be said in terms of the comprehension students were able to arrive at from the texts, because students' comprehension was not the purpose of this research, I claim that the idea of challenging the students with authentic texts without considering new word density of the text in relation to their linguistic proficiency is quite risky, because of the meaning distortion and the impossibility of using topic-specific knowledge as a compensatory strategy that may ensue.

Emphasizing that she chooses only authentic texts, Teacher 3 also mentioned she presents her level 1 students of medicine with some challenge when introducing authentic texts. She stressed that she compensates the difficulty of the texts by activating her students' schemata on the subject along with the corresponding vocabulary, as well as by motivating them to read the texts skimming for specific content, i.e., by having a warm up before reading, so that the students have reasons to

read the text. The teacher stressed that her intent is to have students to pay attention to the information they can understand to answer the questions, and not to the information they cannot understand.

Concerning the level of difficulty and the new word density of the authentic texts chosen in relation to her student's proficiency level, Teacher 3 said she doses, that is, she tries to have a balance by using more difficult texts so to present some challenge, but sometimes easier ones, in a way to please the students who have a bit more difficulty, and thus, avoid frustrating them.

Reading difficulty, however, does not seem to be a problem for her level 1 students. Although they may have problems with unknown vocabulary, the teacher asserts, based on the fact that they do very well in their tests as well as in their reading comprehension activities in class, they are able to cope with authentic texts easily.

This successful reading may, probably, be due to two things: first, that her students are able to use the reading strategies presented at the very beginning of the course; second, that they started the course with a high linguistic proficiency level in English, since they received the best grades in their entrance examination - *Vestibular*. The teacher stressed that her students are "intellectually privileged people" (Teacher 3, in the interview).

The teacher seemed to have both a formative and a summative evaluation[12] of her students' reading competence. She was aware that they started the medical course and the ESP course with a high proficiency level of the target language, and formally

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[12] Brown (1994) points out the differences between formative and summative evaluation. Formative evaluation is the informal, unplanned assessment of students "in the process of 'forming' their competence and skills with the goal of helping them to continue that growth process" (p. 375), whereas summative are systematic, planned assessment "at the end of a unit, module, or course, and therefore attempt to measure, or summarize, what a student has grasped" (p. 376).

and informally assessed their knowledge to confirm that. Teacher 3 seemed to have the feedback needed to choose and use authentic texts.

Unlike Teachers 1 and 3, Teacher 2 chooses not to use authentic texts, but simplified versions of originals for his level 1 students, and may introduce authentic texts at later stages. He aims at keeping a small gap between the linguistic knowledge required by the text and the actual linguistic knowledge of these level 1 students by choosing simplified versions so as to control the new word density of the text and by helping his students in the development of their linguistic knowledge to reach a threshold level for the texts.

He selected a textbook within which the texts were simplified versions because they introduced the structure and lexical complexities of the language in a gradual way, allowing his students to feel more confident and to succeed in their reading. He stressed it is a more adequate choice for level one students: "THAT is the way". (Teacher 2, in the interview).

The teacher noted that, by using these simplified texts, he can control the complexity of the linguistic information - both lexical and grammatical - which his students will have to handle:  "The fact that the readings were not so difficult, yes difficult, that is the word. I think it helped them" (Teacher 2, in the interview).

Teacher 2 seemed to be rather concerned with providing his students with simplified versions in a way to allow his students to learn the structure of the language, i.e., to build "a sort of basis, a sort of bridge" (teacher 2, in the interview) from which they could have authentic texts.

This teacher seemed to know the importance of developing the threshold level for reading comprehension, and was making use of reading for that purpose. While reading aloud with students and translating, he was able to identify and solve the doubts

and/or problems by giving his students explicit explanation to help them to follow in the continuum of learning the language.

*3.2.4.* General Discussion

Topic familiarity and authenticity were the most important criteria mentioned by the three teachers for text selection. Topic familiarity may help beginning and intermediate students to cope with reading by their use of Ridgway's compensatory strategies, which will result in better comprehension and better word guessing. Topic familiarity, also, allows for the occurrence and reoccurrence of topic-related words, making their memorization in long-term memory possible.

Authenticity may, and in my view usually does, overshadow the appropriacy of the text in relation to the students' proficiency level. In my opinion, considering the students' level of proficiency, while choosing texts, in order to make sure the new word density remains low is an essential procedure for vocabulary instruction since: a) it allows for bottom-up information processing with a consequent better comprehension of the whole text, resulting in the improvement of the guesses of the meaning of unknown words, since "each word contributes to the interpretation of the other words that are near it" and that the "images from all of the words in a sentence (or larger context) combine to produce a meaning for the whole" (Stevick, 1982, p. 45); b) it also allows for the diminishing of the number of word skipping occurrences resulting in greater probability of their learning since the learner who adopts the strategy of skipping new words and grasping a general idea of the text content is "less likely to learn the word because he or she was able to comprehend the text without knowing the word" (Nation & Coady, 1988, p. 101).

Thus, I conclude that teachers should consider topic familiarity, but also appropriacy of the texts, in terms of new word density, to the students' level of proficiency, i.e., the text in relation to the reader's linguistic proficiency. For beginning students[13], texts which may either fall into what Widdowson (1978) calls *simple accounts* - addressed to specific readers with specific background knowledge, or into what Day and Bramford (1998) call *language learner literature* - authentic and appropriately simple texts, especially written for language learners, might be a possible choice in terms of combining authenticity and new word density appropriate to the students' linguistic level.

## 3.3    PROCEDURES FOR DEALING WITH VOCABULARY PRESENTATION

The procedures used for dealing with vocabulary presentation were investigated by class observation, note-taking, and recording (except for Teacher 3, as mentioned before). The research question was: *What procedures do teachers use to present the meaning of planned and unplanned new vocabulary?*. I will answer this question by presenting and commenting on the procedures used by the three teachers, first for unplanned vocabulary, and second, for planned vocabulary.

### 3.3.1   *Unplanned vocabulary*

The procedures the teachers used for presentation of unplanned vocabulary, which are presented and commented on below, were a) activating schemata and the

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[13] Although I have no information as to the proficiency level of the students enrolled both in the curricular and extracurricular reading courses, it seems to me that authentic materials such as magazine articles have a new word density much higher for those students than the 2% suggested by Nation and Coady (1988).

corresponding words; b) contextual guesswork, translation and explanation; c) affixes; and d) dictionary use.

*Activating schemata and the corresponding words*

Activating schemata is a procedure that involves students in a discussion on the topic of the text to be read. It results in the activation of topic related words, both in the syntagmatic and paradigmatic axes[14] that may be present in the text.

The three teachers had similar ways of introducing the subject matter of the text as a way of activating schemata and the vocabulary corresponding to what is expected to be found in the text. Teacher 1 stimulated a lot of discussion in Portuguese before introducing the reading based on the title and some pre-reading activities. Teacher 3 did some oral warm-ups and brainstorming in English as pre-reading activities, which allowed title-related words to appear and be written on the board as a way of leveling up the students in the group. Teacher 2 used pre-reading questions present in the book to, in Portuguese, discuss and, sometimes, to answer even before their reading of the text.

*Contextual guesswork, translation and explanation.*

Contextual guesswork, translation and explanation are procedures teachers may resort to when assisting their students in arriving at the word meaning. Contextual guesswork involves the use of contextual cues (see 2.5.2) to guess the meaning of the word. Translation is the provision of the equivalent word or phrase in the mother tongue

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[14] Topic related words in the syntagmatic axis are the words that establish a syntactic relationship with the topic word (e.g., collocation: dark collocates with night). Topic related words in the paradigmatic axis are the words that establish a semantic relationship with the topic word (e.g., synonyms, and antonyms).

for the unknown word of the second language. Explanation of word meaning means to make use of any strategy (see 2.5.2) to help students arrive at the meaning of the unknown word.

As for the presentation of the meaning of the unplanned vocabulary present in the text, some differences were observed. Teacher 1 had an approach to dealing with text reading in the classroom that required very independent reading on the part of her level 2 students. She oriented them to engage in the reading of the text, and to try to guess the meaning of unknown words by using contextual clues. Her students, however, used the dictionary a lot, which may suggest either that they did not know how to make use of context to infer meaning, or that contextual clues were not enough for the inference.

In fact, although guessing word meaning by contextual clues is a very useful procedure for text reading, especially for proficient readers, it may be hindered by factors such as too few encounters with specific words, contextual clues that are either misleading, intrinsically unhelpful or beyond the learner's linguistic knowledge (Harley et all, 1996, p. 281), or may result in wrong guesses, since correct guesses for high proficient readers correspond to no more than 60% of the total, while for low proficient readers, they correspond to no more than 25% (Morisson, 1994, cited in Morisson, 1996).

An example of distorted comprehension that may be attributed to either the skipping or the guessing strategy was when Teacher 1's students were reading the magazine article *Families in Upheaval Worldwide*. The students were trying to make sense of the text with the information they could grasp, inferring the meanings of unknown words. While checking the answers to the comprehension questions, they had to go back to the text and re-read a paragraph for better comprehension.

The paragraph was as follows:

> "Parents all over the world have an increasing awareness that their children will need literacy and numeracy, " Ms. Bruce said. "That means that instead of having their 6 year old working with them in the fields, they have to pay for school fees, uniforms, transportation and supplies."

Besides *awareness*, students failed to understand *instead of*, and their comprehension was that the parents made their children work in the field, the opposite of what could be understood from the paragraph. The teacher, then, had her chance of assisting students' comprehension. However, since there were 25 paragraphs, but only 6 comprehension questions, the question of how many other skipping occurrences or wrong guesses happened in the text with the same kind of misunderstanding remains, to me, unanswered.

Teacher 1, also, oriented the students to discuss meaning guesses within their groups. Although helpful, I claim that this kind of task needs careful monitoring to clarify meaning, and ensure that the activity has been effective in supplying accurate information. Since comprehension was checked mostly through the 6 comprehension questions, with very little monitoring on the part of the teacher during reading, the question of accurate information also remains, to me, unanswered.

Unlike Teacher 1, Teacher 2 had a more assisted approach to dealing with reading, identifying sources of problems, and presenting the meaning of unplanned vocabulary. The teacher and the students read the texts aloud and, when unfamiliar words appeared, he helped the students find and make use of the contextual clues to infer meaning, or possible meanings, or simply gave, or elicited from the other students, synonyms or translations to Portuguese.

Although Teacher 2 stressed, in the interview, that the main reason why he used translations was to meet the objectives of the ESP reading course for the translation in

the foreign language proficiency test his students will have to take, it seems that he was concerned with checking his students' guesses, which is very consistent with his approach of building the structure of the language, the "sort of basis" he mentioned in the interview.

The teacher seemed to be excusing himself for using translation as a means of presenting vocabulary meaning. In fact, teachers, still today, feel embarrassed when admitting they use translation, as if they were doing something wrong. Since the beginning of Communicative Language Teaching, any language other than the target was avoided, sometimes prohibited, even at the cost of resulting in a misunderstood word meaning. In terms of meaning presentation, there does not seem to be any reason for such a prohibition, since translation can be a very effective way of conveying meaning and is not necessarily a disadvantage if compared to definition or synonyms, since they all may convey inexact meanings (Gairns & Redman 1986).

Teacher 3 read the text aloud, pausing, asking about doubts and involving all the students in the attempts to answer them. Whenever necessary, she explained by giving examples. Translation was avoided since the whole class was given in English, but used when needed, especially when some students were in charge of presenting the text.

While reading, Teacher 3 sometimes took the initiative of challenging the students concerning words and expressions she knew that might be difficult for her students. This happened with *due to*. Since some students knew it, she made sure all had understood and went on, showing the other occurrences of the newly presented word.

*Affixes*

Affixation is the process of adding prefixes or suffixes to a base form in such a way as to build or form new words. An understanding of word building or formation is

essential for students to be able to make informed guesses[15] about the meaning of unknown words.

Knowing how to use affixes is a very useful way of guessing word meanings, and is part of the *Guidelines for Vocabulary Teaching in 1980* presented by Carter and McCarthy (1988). Affixes were the concern of the three teachers, since they all presented and worked with them. Teacher 1 presented an activity to teach affixes by using twelve words taken from the text within her unit 1. The prefixes were *co-, com-, demo-, ex-, non-, un-, poly-, pre-, uni-*. Teacher 2 worked with an activity introducing affixes used in computer science to help his learners guess the meaning of new words. They were: *deci-, hexadeci-, kilo-, mega-, giga-, mini-, micro-, bi-, tri-, multi, mono-*.

Teacher 3 chose the text "Medical terms in plain English" to introduce affixes used in medicine to help her students guess the meanings of the vocabulary, that is, to understand the medical terms. The prefixes were: *a-, an-, dys-, ecto-, endo-, hyper-, hypo-, leuko-, melano-*. The suffixes were: *-algia, -cide, -ectomy, -emia, -genic, -gram, -itis, -iasis, -oma, -otomy, -scope*.

Teacher 3 also taught the various functions of the suffix *-ing* by showing four occurrences in a text as a way of helping her students to find out the different grammatical categories the words take on when carrying this affix, and thus, enhancing the likelihood of getting the right meaning for the word.

The three teachers seemed to know that word analysis in terms of affix decoding is a very useful strategy for guessing the meaning of unknown words when dealing with reading, and devoted part of their classes to the development of this strategy with their students. (note: I myself have, for example, seen most of my students guessing easily

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[15] An informed guess is when the reader is able to make use of the available linguistic cues in combination with his/her general knowledge of the world and awareness of the situation, and his/her relevant linguistic knowledge (Morrison, 1996).

the meaning of *Enlightenment* by using their background knowledge of history, and the radical *light*).

*Dictionary use*

Dictionary use refers to the use students make of the dictionary to get the meaning of an unknown word, clarify it in case of doubts, or confirm it as a back up to contextual guesswork.

The dictionary did not seem to be used either in Teacher 2's or 3's classes. In the case of the former, there was very little need for dictionary use, since the teacher assisted students with meaning presentation. In the case of the latter, students seemed to have the proficiency level to stand on their own, and use contextual clues to find meaning of unknown words. Also, Teacher 3 assisted her students in case of doubts.

In the case of Teacher 1's classes, dictionaries were frequently used during the readings, although the teacher oriented her students to avoid  its use.

Dictionary use may be a helpful way of finding out the meanings of new words and new uses for old words, as well as various examples of their uses. Students need to be instructed to make optimal use of it, taught how to use it, and oriented in terms of choosing adequate dictionaries to their levels: bilingual dictionaries may be more useful for beginning students, whereas monolingual dictionaries are more adequate for intermediate and advanced students, following the natural progression suggested by Hatch and Brown (1995).

Concerning unplanned vocabulary, the answer to my research question *What procedures do teachers use to present the meaning of planned and unplanned new vocabulary?* is that the three teachers relied on: a) provoking previous discussion on the subject-matter or presenting pre-reading questions so as to activate schemata and elicit

corresponding words in English, in the case of Teacher 3, and in Portuguese, in case of Teachers 1 and 2; b) activities done on affixes to find word meaning; c) guessing meaning from context; d) translation, used mostly by Teacher 2 and seldom, upon necessity, by Teachers 1 and 3; e) dictionary use, mostly used by Teacher 1's students.

### 3.3.2 *Planned vocabulary*

The procedures provided within the units used by the three teachers to assist the presentation of planned vocabulary, which are presented and commented on below, were: a) guessing meaning from context activities; b) scrambled words; c) glossaries; d) matching opposites; e) fill-in-the-blanks activities; f) making sense of sentences; and g) definitions to find words in the context.

*Guessing meaning from context activity*

Guessing meaning from context are activities designed for students to get the meaning from context by choosing definitions for the words selected as they occurred in their contexts. They are helpful activities since they create saliency of some words, and they also require students to re-read the text, consider the surrounding words to be able to guess the word meaning.

Teacher 1 used the "Getting Meaning from Context" provided in units 1 and 3, designed for students to find the best definition for the words selected. Although this kind of activity is very helpful, most of the words selected by the author of the units were cognate words: such as *myth*, *dissolving*, *exceeded*, *vary*, *migrated*, *extensive*, *proportion*, *superficiality*, *discards* and *generating*. Students probably could tell their meanings only by their similarity to Portuguese, and thus dispensed with the need for using contextual clues.

Many other words would have been more adequate for the activity. The criteria used should involve crosslinguistic factors in terms of considering the differences and similarities between the languages involved. Aside from the misleading, and therefore difficult, false cognate words, words similar to learners' native language are simple to assign meaning to, whereas, dissimilar words may be more difficult. These difficult words should be the ones selected in such an activity.

The word *pressing* seemed to be one word which required further explanation in terms of meaning, since the very fact that it looks like a word in Portuguese might be, in the case, misleading to readers. The two definitions from which students had to choose one, however, left little doubt: between the two definitions - *pushing against* and *urgent*, the second choice was the right one for the word in its context. Although the answer was obvious, working upon the word was a chance for learners to concentrate and reflect on the word and its possible meanings, thus involving the students and enhancing the probability of remembering the new meanings.

For words such as *appalled, chagrined, overwhelm, odiferous, glut*, students were to re-read the sentences in which they occurred and choose the best definition. Since the activity did not provide more context to help students, it worked, in my view, as a glossary which allowed two possibilities, and, thus, involving students in using contextual clues to find meanings.

A guessing from context activity mixed with matching terms with their definitions was used by Teacher 2. It was an activity in which students were to use the information from the text and from the diagram in the book to guess and define word meaning, and then, match some words from the box with the appropriate definitions or explanations provided. The words chosen were mostly technical terms in the area of computation, such as *software, monitor, hardware, floppy disk, input, output*, which are

frequently used in their original forms in everyday conversation in Portuguese among people in the area, and even among lay people. Again, the choice of words seemed to be inadequate.

Guessing words from context was also presented by Teacher 3. It was a match columns activity in which each one of the nine sentences, extracted from the text and placed in column A, had one italicized word for which students had to find meaning from column B. Words italicized were: *layman*, *apply*, *severe*, *pinned*, *causality*, *obstructed*, *scooping*, *expel*, *relish*.

The same problem of choosing cognate words appears. The words *apply*, *severe*, *obstructed*, *expel* are cognate and impose little difficulty for understanding. Words like *layman*, *pinned*, *scooping*, *relish* are good examples of words worthy to be worked upon, since they might be of use for medical students.

*Scrambled words*

Scrambled words is an activity in which students are presented with all the words of a sentence in a scrambled order, and have to put them in the correct order. Students are to recognize, find out or, sometimes, extend the referential and the syntactic meaning of each word to be able to put the sentence in the correct order.

Scrambled words is a very helpful activity to enhance students' awareness of words' grammatical categories in a sentence, thus contributing to the development of word meaning, since the meaning of a word embraces its use, which implies knowing the word's grammar category and how it relates with other words. It was used by Teacher 1 when teaching the modals *must*, *should*, *can*, *ought to*, *may* and *might* in the active and passive voices in unit 2. Students were to write the sentences in the correct order.

*Glossaries*

A Glossary is a list of words taken from their context and presented separately with either their definitions in the second language, or their corresponding translation into the native language.

Glossaries are a helpful way of presenting the meaning of some words, especially the ones considered difficult or too specific to deserve attention. Glossaries were present in the unit 1 that Teacher 1 worked with. Some idioms, expressions and topic-related words were presented with a definition for each as they occurred in the text. They were words such as *coin a term, give a hoot, factoid-heavy, eco-glibberish* and *landfills*. Providing them as a glossary was, in my view, an adequate choice. They are very infrequent words not worthy of learning for most of her level 2 students from engineering. Also, they may be considered more difficult to learn because of their idiomaticity and specificity (Laufer, 1997).


*Matching opposites*

Matching opposites are activities in which students are presented some words in one column and have to match them with their antonyms or antonym phrases in another column.

Matching opposites is a helpful activity for confirmation of meaning, through which students were to re-read the text, spot the words, consider possible meanings, and risk a choice in terms of opposite. It was introduced in unit 1 given by Teacher 1. The 8 presented were *havoc, depleting, cataclysmic, overindulging, ideological, glib, nondurable* and *consumption*. The opposite words were: *manufacture, objective* and *factual, carefully considered, order, increasing, controlling or limiting consumption, very fortunate,* and *lasting*.

Although it is a very helpful activity since it helps learners to define and redefine the meanings of words in terms of comparing them with their opposites, it is, in my view, quite difficult to find the opposite of the words selected. In addition, the words selected are very infrequent and specific, being more adequate for a glossary.

*Fill-in-the-blanks activity*

Fill-in-the-blanks activities involve deletions of words from sentences, creating blanks students are to fill in with an appropriate word. The words to be filled in can be randomly chosen, or carefully chosen following some criteria used by the teachers.

Fill-in-the-blanks activities are helpful since they make it possible for students to have a trial use of the newly learned words, check the hypotheses of meaning under construction, and be corrected by the teacher in case their hypotheses are incorrect. Also, they help the development of the word meaning in terms of the relationship each word establishes with other words in the syntagmatic axes; that is, they help the development, in the learner, of the notion of collocation (see 2.2.2).

Fill-in-the-blanks activities were used by the three teachers. In the case of Teacher 1, the activity was as follows: the 4 words to be filled in were to be selected from a total of 8: *havoc, depleting, cataclysmic, overindulging, ideological, glib, nondurable* and *consumption*. The four sentences were created specifically for the activity, therefore not taken from the text. An example was: 'Political, _____ thinking is not very helpful when trying to find clear, practical solutions to environmental problems', where students were to choose the word 'ideological'.

The teacher took advantage of this activity to help her students develop the strategy of contextual guesswork, since she exhaustively exploited the context, helped

students use the contextual clues and arrive at the meaning and grammatical category of the missing word.

A fill-in-the-blanks activity in the form of a cloze text with 7 blanks was provided in a unit given by Teacher 2. Compared to the fill-in-the-blanks activity with loose unrelated sentences, a cloze text may be more effective, since it provides much more information in terms of contextual clues throughout the text to help the students guess the meaning of each missing word and, eventually, choose the correct one from the box.

In the activity, students were to fill in the blanks with 7 words chosen from a box. Except for the word *task*, all the others were related to computation and either used in Portuguese or cognate words, and thus, in my view, inadequate.

A fill-in-the blanks activity in the form of a flow chart was used by Teacher 3. The 11 missing words were not provided in boxes and could be any from the text previously worked with. Students were, then, to produce newly learned words they had just been introduced to. In this case, there should be, in my view, an intermediate phase between the presentation of the words and the request to produce the same words, aiming at familiarizing the students with them. In other words, it was, in my view, too fast from presentation to production, without an intermediate activity such as 'match with definitions' or 'find the synonyms or opposites'.

*Making sense of sentences*

Making sense of sentences activities are designed to check comprehension of sentences from the text in which some more difficult linguistic elements were presented.

Teacher 1 used Making sense of sentences activities, in which students were to show their comprehension by choosing the best alternative statement with the same

meaning as the phrase provided. It is a very helpful activity which teachers can use to check students' comprehension of sentences that may pose difficulties for the students in terms of comprehension.

The choice of the phrase *much more likely to be poor* was adequate, in my view, since the meaning of the word *likely* may be difficult for learners to understand, even in context, because they tend to associate it with meaning of *like* as a verb or preposition, usually known to them, and arrive at a wrong meaning of the word, probably leading to a misunderstanding of the whole sentence. In this case, the existing knowledge interferes with the comprehension of the target word, since students tend to stick to the existing meaning they have for it, preventing them from considering other possible meanings.

The learning of a new language is influenced by existing linguistic knowledge, be it native or target language (White, 1987). The comprehension of a word is influenced by the existing meaning students have of it, which may even prevent them from considering other meanings, and from extending the word polysemy. Typical examples observed in classes are when students are presented with the word *close* as an adjective, when students already know it as a verb, and the word *last* as verb, when they already know it as an adjective. In such cases, they insist on trying to make sense with the existing meaning they have (inadequate for the context), and they simply cannot see what is wrong in the sense they are making of the sentence.

Such situations demand the teacher's interference in terms of showing the students what is wrong in their constructions, and correcting them (White, 1987). In my view, words such as *likely*, *last* and *close* need to be worked on, so that teachers can check the students' guesses, and extend their polysemy. The activity "Making Sense of Sentences" can be very helpful for this purpose.

*Definitions to find the word in context*

These activities provide definitions for students to find words in context whose meaning correspond to the definition provided.

These are very useful activities to confirm meanings of the selected words since they provide first the definition, and students are to provide the word that fits the definitions based on the text.

Such an activity in which definitions are given in the form of slogans or quotations for students to give the corresponding words found in the text is used by Teacher 2. An example was the word *mouse*, found based on the *'point and click here for power'* and *'obeys every impulse as if it were an extension of your hand'*.

Again, the choice of words was, in my view, inadequate, because they are either cognates, or used or seen frequently by Brazilian students in the area. The words chosen to be provided were: *mouse*, *monitor*, *CPU*, *printer* and *keyboard*.

Concerning planned vocabulary, the answer to my research question *What procedures do the teachers use to present the meaning of new planned and unplanned vocabulary?* is that a wide variety of activities, provided either by the teacher or within the units, are used: a) guessing words from context; b) fill-in-the-blanks; c) scrambled words; d) glossaries; matching opposites; e) making sense of sentence; f) definition to find the word in context.

### 3.3.3. *General Discussion*

The procedures used by the three teachers for meaning presentation of unplanned vocabulary were, for the most part, based on the strategies suggested by the top-down oriented reading courses: a) previous discussion on the subject-matter to activate schemata; and b) activities done with affixes and guessing meaning from

context. Translation, used by teacher 2 with his low linguistic proficient students, and the dictionary, used by Teacher 1's students, may show, however, that procedures other than activating schemata, meaning guessing and affixes knowledge might be necessary for meaning presentation.

The procedures used by the three teachers for meaning presentation of planned vocabulary were guessing form context, scrambled words, glossaries, matching opposites, fill-in-the-blanks, making sense of sentences and definitions to provide words. Although helpful activities, a recurrent problem was the inadequate choice of the words to be worked upon, since most of them were either infrequent, cognate, or used in Portuguese, as is the case of the terminology used in computer science.

## 3.4 PROCEDURES FOR DEALING WITH VOCABULARY RETENTION

The procedures used for dealing with vocabulary retention were investigated by class observation, note-taking, and recording (except teacher 3, as mentioned before). The research question was: *What procedures do teachers use to assist the retention of the newly learned words?* I will answer this question by presenting and commenting on the procedures used by the three teachers, first for unplanned vocabulary, and second, for planned vocabulary.

Language teachers should systematize the new linguistic knowledge in order to assist the consolidation, in memory, of word meaning and word form. The procedures used as classroom activities play a very important role in this process, and are, therefore, important in ESP reading courses.

The procedures to assist the memorization of vocabulary should be based on the following principles suggested in the specific literature (see sections 2.4.2 and 2.5.3): a) depth of processing principle (Craik & Lockhart, 1972), i.e., analyzing or enriching words with associations or images of any kind enhances memorization (Cohen, 1990); b) organization principle, in that organized material is easier to be stored in memory (Crow & Quigley, 1985; Baddeley, 1990); and c) reviewing principle, since well-balanced successive occurrence of words enhance memorization (Stevick, 1982).

### 3.4.1 *Unplanned vocabulary*

The three memorization principles mentioned above are used for the analysis of the data collected in this section, which is divided into: a) analyzing or enriching the new words with associations or images; b) organizing the new words; and c) reviewing the new words to promote successive encounters.

Analyzing or enriching words with associations or images

Analyzing or enriching words with associations or images, such as paired associates, key word method, in order to create memory link with the existing knowledge, may help memorization of new words.

Teacher 1 oriented her students to engage in silent reading and to make sense of the text on their own, in small groups or individually. Questions concerning vocabulary were very rare. When the meaning of vocabulary was asked, the teacher mostly presented the translation to it, sometimes showing it in its context, consequently, in association with the words the new word collocates with.

Apart from that, she showed very little concern for analyzing the words semantically or enriching them with associations or images of any kind. No further work was developed.

Teacher 2 read along with his students in English. When the meaning of vocabulary was asked, the teacher mostly presented the students with the translated word, thus creating an association with its equivalent in the students' native language. Apart from this, he showed very little concern for analyzing or creating other associations. Words such as *avoid* were translated to Portuguese upon students' request for meaning. Associations such as orthographical comparison are helpful in such situations for retention in memory.

Orthographical comparison is a way of creating associations to assist memorization (Nattinger, 1988). Although *avoid* is not a cognate, there is a way we can compare it to the corresponding Portuguese word *evitar* and help students see the similarities. Both *avoid* and *evitar* are short words, have "v" as the second letter, followed by a vowel. Also, by covering the first two letters, both *several* and its corresponding Protuguese word *vários* have "v" and "r" in the same sequence, and both *attempt* and its corresponding Portuguese word *tentativa* have three "ts".

Teacher 3, in addition to using translation, examples and meaning guessing, challenged her students by asking questions concerning the meaning of some words she considered important for them to know. By doing this, the teacher could create saliency, and allow for deeper semantic processing of the target words.

*Organization of the new words*

The organization into sets such as semantic, situational or topic-related sets, may enhance memorization of the new words.

Teachers 1 and 2 did not show any systematization in terms of organization of the unplanned new words. No semantic, topic-related or situational sets as a result of the warm-ups or pre-reading activities were ever done in class.

Teacher 3 presented the students with warm-up activities in the form of a brainstorming related to the topic, with specific questions aimed at eliciting specific information, and, consequently, topic-related words that were, then, written on the board.

*Reviewing to promote successive encounters*

The systematic reviewing of the new words, following the spaced intervals suggested by Stevick (1982, see section 2.4.2), may enhance memorization.

No systematic reviewing the newly learned words was done by Teacher 1. The words that popped up during the pre-reading debate she promoted in Portuguese were never written on the board in English. No reviewing was ever done concerning the words whose meanings were asked during class time.

Natural reviewing by the successive occurrences of the same words in balanced intervals, especially the topic-related words, has probably not happened either. The very fact that the teacher chose (and usually chooses) texts from different areas (environment, movies and family affairs in the case studied) and with different themes to cater to the different interests of her students (from different areas) makes it more difficult for the re-occurrence of the same words at balanced intervals.

Teacher 2 reviewed the vocabulary he claimed to be important for his students to remember. He started a class by suggesting a game with students in order to revise the new vocabulary presented in previous texts. The words were: to *perform, cash dispenser, drug detecting tests, at incredible speed, output, wind, stopovers, however, labor, to handle, input, to store, string manipulation.*

Because students could not remember most of the words, which may suggest that mere exposure may not suffice, the teacher and students went over the words and teacher refreshed students' memories of the word meanings.

Natural reviewing by the successive occurrence of some words may have happened in Teacher 2's classes since he chose (and usually chooses) texts from the students' areas (computer technology), allowing for the re-occurrence of the same words at balanced intervals, and thus, enhancing the likelihood of retention in long-term memory.

Teacher 3 provided successive encounters by starting some classes with a review of the vocabulary learned in the previous classes, and showing the students the various occurrences of words such as *due to* in the same text, in the same class.

Teacher 3 also worked with previewing of topic-related words. She presented the students with warm-up activities in the form of brainstorming related to the topic, with specific questions aimed at eliciting specific information, and with the writing of the words on the board.

Since the classes were given in English, either the teacher or the students who knew the words required would provide them. The words elicited were, then, emphasized to the whole group for all students to have the first encounter. The second encounter would be in the reading. Successive encounters were created for some words.

Natural reviewing by the successive occurrence of some words has happened in these classes since Teacher 3 teacher chose (and usually chooses) texts from the students' areas (medicine), allowing for the re-occurrence of the same words at balanced intervals, and thus, enhancing the likelihood of retention in LTM.

3.4.2  *Planned Vocabulary*

Different activities were provided within the units used by the three teachers to assist memorization of the meaning of planned vocabulary meaning. They were *matching opposites* and *fill-in-the-blanks activities* (both activities already mentioned in section 3.2).

*Matching opposites*

Finding opposites activities may help memorization, since it is easier to store organized material in memory than randomly presented material (Baddeley, 1990), in the case, organized in terms of belonging to semantic sets (Nattinger, 1988), as the opposite words or phrases. Teacher 1 used such an activity with her students. The choice of words, however, did not seem to be adequate. Three of them were cognates: *ideological*, *nondurable* and *consumption*. The other five words are very infrequent: *havoc*, *depleting*, *cataclysmic*, *overindulging* and *glib*, maybe not deserving much attention for level 2 students.

*Fill- in- the-blanks*

The fill in the blanks activity is helpful for memorization because it involves students in review and in deep processing of the word meaning. In addition, unlike most of the other activities such as 'getting the meaning from context' or 'find the definition', which present the word first, and the meaning is to be found in the context, fill-in-the-blanks activities present first the meaning, which is to be arrived at by the contextual guesswork based on the information of the whole sentence, and the target words are to be found, either in the text, in boxes, or in the previous exercises.

In other words, students are to produce and use the words in appropriate situations, not comprehend, and the sequence turns from form-to-meaning (comprehension) to meaning-to-form (production), since students are to activate their storage by retrieving the words from the memory. Vocabulary becomes, as a consequence, more active and more likely to be retrieved from memory (Nattinger, 1988).

### 3.4.3  *General Discussion*

Considering the research question *What procedures do teachers use to assist the retention of the newly learned words?*, I found that teachers capitalized very little on the principles of memorization, and exploited only some of the possibilities suggested by the literature in the area of vocabulary teaching and learning.

In terms of unplanned vocabulary, associations were not used by the teachers, except for association with the translation equivalents, and semantic analysis very rarely used. Teachers 2 and 3 used revision of new words, but not systematically, that is, without observing the intervals and repetition that Stevick has shown to be essential. Also, Teachers 2 and 3 used different texts with the same topic, allowing natural reviewing of topic-related words.

In terms of planned vocabulary, new opportunities for use of the new words were provided in the form of fill-in-the-blanks activities within the units used by all of the teachers.

Techniques such as grouping, associating new and old information, semantic mapping, key word technique, sound representation, carefully spaced interval reviewing, loci, paired associates, cognitive depth, word family, orthographical

similarities, situational sets, semantic sets, rhymes, paraphrasing, physical action, semantic grids for collocations, collocation, pictures, flash cards were not used.

The author of book used by Teacher 1 also neglected the importance of activities designed for vocabulary retention. Unit 3, for example, concentrates all its activities on getting the message, getting the meaning and making sense of sentences, without any activity to assist memorization. Although the saliency of the words students were to find meaning for may lead to retention, there is a clear neglect in this unit to activities designed for vocabulary retention.

# CHAPTER IV

# FINAL CONSIDERATIONS

In chapter 2, I presented the theoretical basis for the research. In chapter 3, I presented the data analysis and discussion. In this chapter, I present the main conclusions of the study, the limitations, suggestions for further research, and the major pedagogical implications.

## 4.1 GENERAL CONCLUSIONS

Some conclusions can be drawn based on the research I carried out on the procedures the teachers investigated used for vocabulary instruction within ESP reading courses.

I found that the three teachers considered topic familiarity and authenticity important criteria for text selection. All three teachers chose texts with familiar subject matter for their students. Teachers 2 and 3 chose and usually choose texts especifically within their students' area of study, namely, computer science and medicine, respectively. Teacher 1, however, chose different texts to cater for her students from different areas.

Authenticity, however, was actually a reference for text selection, since they had different positions as to the choice and use of authentic texts in their ESP reading courses: Teacher 2 does not use authentic texts, since he believes they are too difficult for his level 1 students; Teachers 1 and 3 claimed they use only authentic texts.

Also, I found that there is still a taboo and controversy concerning the use of authentic texts and authenticity. Because of the conviction among teachers that the use

of authentic texts is the right thing to do, the issue of authenticity provoked tension and insecurity during the interviews at two moments: first, when Teacher 2 asserted his choice of non-authentic texts so as to make his students' reading less difficult and less traumatic; and second, when teacher 1 was asked about the source of the text *The Greatest Movie Ever Made?* and, concluding that it might not be authentic, tried to justify the choice by arguing that it was not a bad choice because it was written by a native speaker of the language.

The meaning of authenticity gets complicated when deciding whether or not a text is authentic. Although Teacher 3 assured me that she dealt only with authentic texts, I have doubts concerning the text *How To Carry Out Resuscitation* (see Appendix 7) used by her. As in the case of Teacher 1, there is no mention of source, and the text has a teaching format because it was copied from a textbook. I claim that, even if it was originally authentic, it lost its authenticity when it was brought into the classroom for teaching purposes. Also, it seems to me that it was never considered authentic by the students because of the very fact that they were not told, and they did not even bother to ask, where the text had been originally published.

Concluding that the notion of authenticity is a relative matter, David Nunan (1999) claims that one 'de-authenticates' texts when "one takes into the classroom material collected out of the classroom" (p. 37). In addition to that, Nunan argues that de-authenticating material is not something teachers ought to be ashamed of, because the very specificity of classrooms is to make the learning process easier, where "the pedagogical 'bridges' are built by the teacher and the textbook so that learners ultimately can cross over into the authentic world beyond the classroom" (p. 37).

Corroborating the view Nunan (ibid.) has presented, I claim that the use of authentic texts such as magazine articles, leaflets, labels, etc. may be inadequate if

teachers do not consider that the learning process has to be well balanced so as to build knowledge upon knowledge, by controlling the amount of information, allowing time for and assisting the students to accommodate the new learning.

In practical terms, the discussion of authenticity seems to be endless. Although important, it has, in my view, overshadowed, among ESP teachers, the important issue of adequacy of the text in relation to the students' linguistic knowledge. Teacher 1 used authentic texts without bothering about the adequacy to her students' linguistic knowledge. On the other hand, Teachers 2 and 3 showed some concern towards the adequacy of the texts chosen to their students' linguistic knowledge, which may suggest that ESP teachers are moving away from strictly top-down oriented ESP reading courses.

However, concerning meaning presentation, I found that the procedures used by the three teachers for unplanned vocabulary were, for the most part, based on the strategies suggested by the top-down oriented reading courses, such as: a) previous discussion on the subject-matter to activate schemata; and b) activities done on affixes, and c) guessing meaning from context. Translation, used by Teacher 2 with his low linguistic proficient students, and the dictionary, used by Teacher 1's students, may suggest, however, that procedures other than activating schemata, guessing meaning and knowledge of affixes may be necessary for meaning presentation.

I found that activities such as guessing from context, scrambled words, glossaries, matching opposites, fill-in-the-blanks, making sense of sentences and definitions were activities used by the teachers for meaning presentation of planned vocabulary. I also found a recurrent problem of inadequate choice of the words to be worked upon, since most of them were either infrequent, cognates, or used in Portuguese, as the case of the terminology in computer science, which is, in my view,

due to the fact the material writers have very little, if any, knowledge of the Brazilian students' native language.

The very fact that teachers and book designers capitalized very little in terms of procedures for consolidating word form and meaning in memory shows that they are still unaware of what can be done in terms of vocabulary teaching. Today, teachers have a large number of vocabulary teaching strategies and techniques at their hands that they may still be unaware of, or have not yet put into practice.

Concerning procedures to assist memorization, I found that teachers capitalized very little on the principles of memorization, and exploited only few of the possibilities suggested by the literature in the area of vocabulary teaching and learning. Associations and semantic analysis were not used; and systematic reviewing of new words were rarely used, although using different texts with the same topic may have allowed for natural reviewing of topic-related words. In terms of planned vocabulary, only fill-in-the-blanks activities were used by the three teachers.

4.2   LIMITATIONS OF THE STUDY

Some limitations of the research concern the data collection. First, only part of the reading courses was observed. Procedures for vocabulary instruction other than the ones collected and analyzed may be used by the teachers observed. Second, the data collected of Teacher 3's classes were not recorded, allowing for some possible mistaken analysis related to the procedures in the classroom. Third, the number of teachers taking part in the research was low, preventing the researcher from collecting more data and enriching even more the discussion and the data analysis.

Since the research focus is on the teacher, the data collected is related to teaching procedures, not to the learning procedures that the students use for vocabulary learning, thus allowing very little to be said by the researcher in terms of the effect of the teaching procedures for vocabulary learning. For the same reason, data concerning students' comprehension of the texts was not systematically collected, except for some occasional observation, preventing the researcher from stating much about the effects of the teaching procedures for comprehension.

4.3   SUGGESTIONS FOR FURTHER RESEARCH

The inadequate choice of vocabulary to be worked upon suggests that more research is needed in terms of evaluating, selecting and preparing material especially designed for Brazilian Students.

More research into what procedures, strategies or techniques have been successful for Brazilian students is necessary so as to provide ESP teachers with a wide range of possibilities for effective vocabulary instruction.

Also, more research is needed on the adequacy of ESP reading programs for preparing students for the UFSC Language Proficiency Exams, considering the literature on reading, and the nature of the exams. For example, it can be pointed out that: a) translation is avoided in ESP courses but used in the Proficiency Exam for the whole text; b) leaflets, labels, magazine articles are used in ESP programs whereas academic texts are used in the Proficiency Exam.

Further research is needed on developing criteria and instruments for assessing students' proficiency level in terms of vocabulary knowledge, since there is considerable evidence of the importance of choosing adequate texts in relation to students' proficiency level. For the same reason, more research is needed on what makes a text difficult to read.

## 4.4   PEDAGOGICAL IMPLICATIONS

This research has shown the importance vocabulary knowledge has in reading comprehension as well as the important role teachers have in systematizing their teaching procedures by resorting to what the specialized literature and research in the area have shown as procedures for vocabulary instruction.

The implications of my research for ESP reading courses is that much more commitment is necessary on the part of the teachers in terms of engaging in a reflective teaching perspective, allowing for discussion of the criteria used for text selection, and the procedures used for vocabulary presentation and retention in memory. This commitment calls for regular and frequent workshops in which teachers can share and discuss their experiences concerning vocabulary instruction.

Another implication is the need for using textbooks which are especially designed for Brazilian students, and which present texts appropriate for the students' level of proficiency, since this research has shown the inadequate choice of vocabulary selected for teaching in the textbooks used by the teachers, as well as the need for appropriate texts in such courses.

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